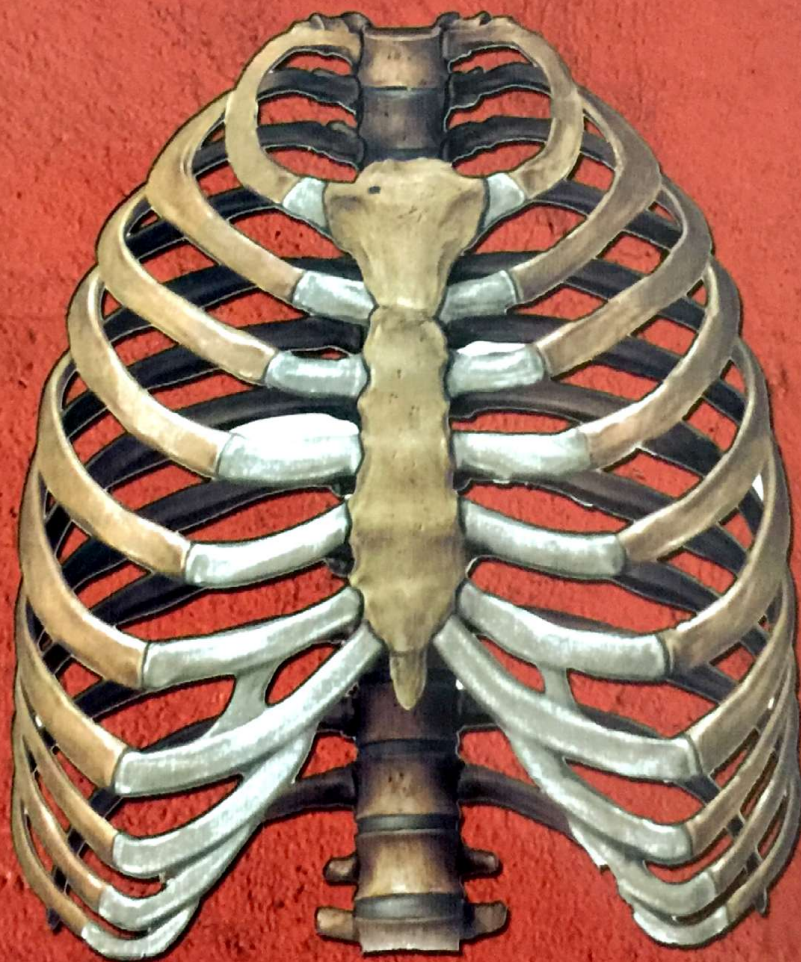


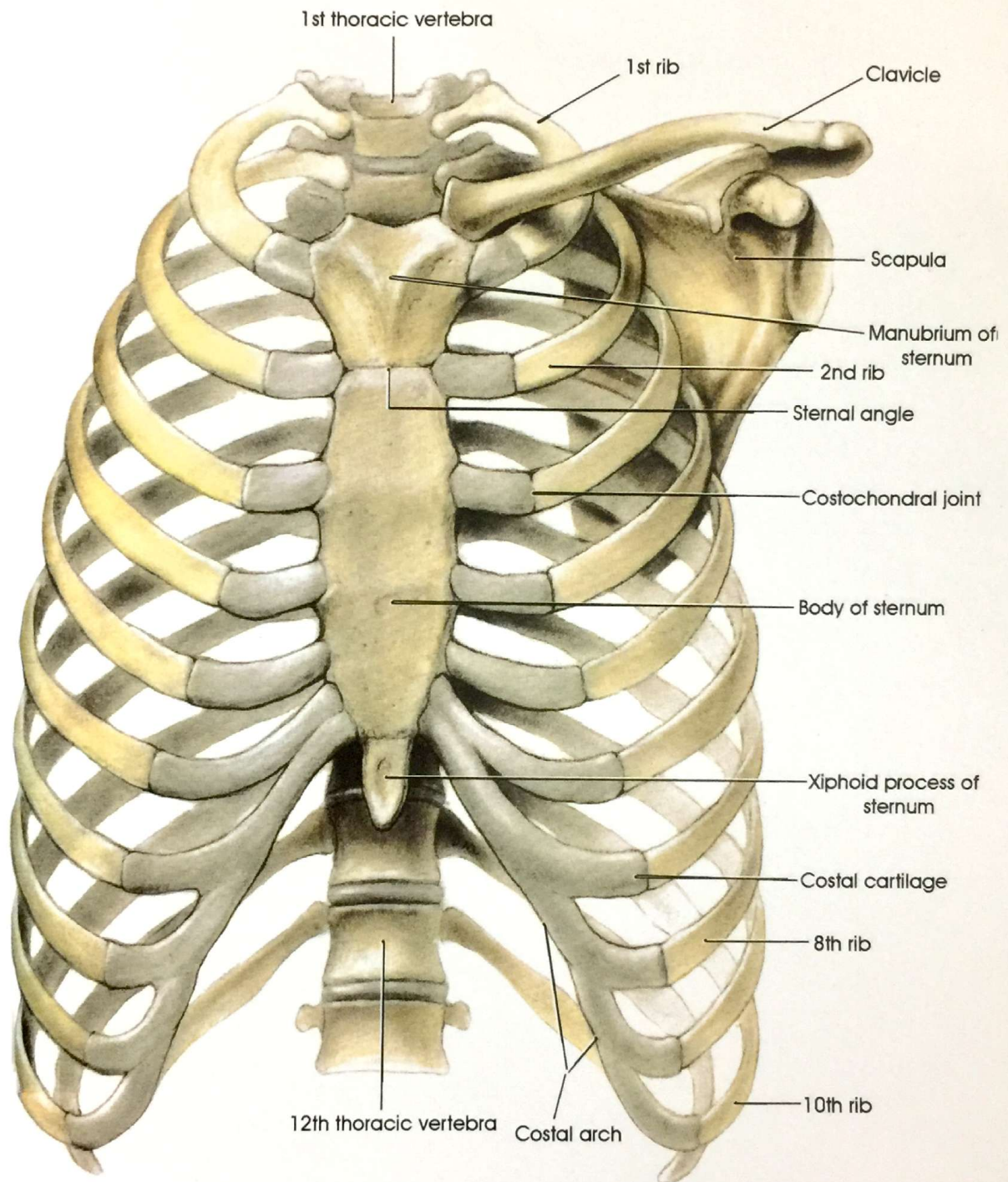
El-Fiky's

MINI ATLAS OF
ANATOMY
PART I

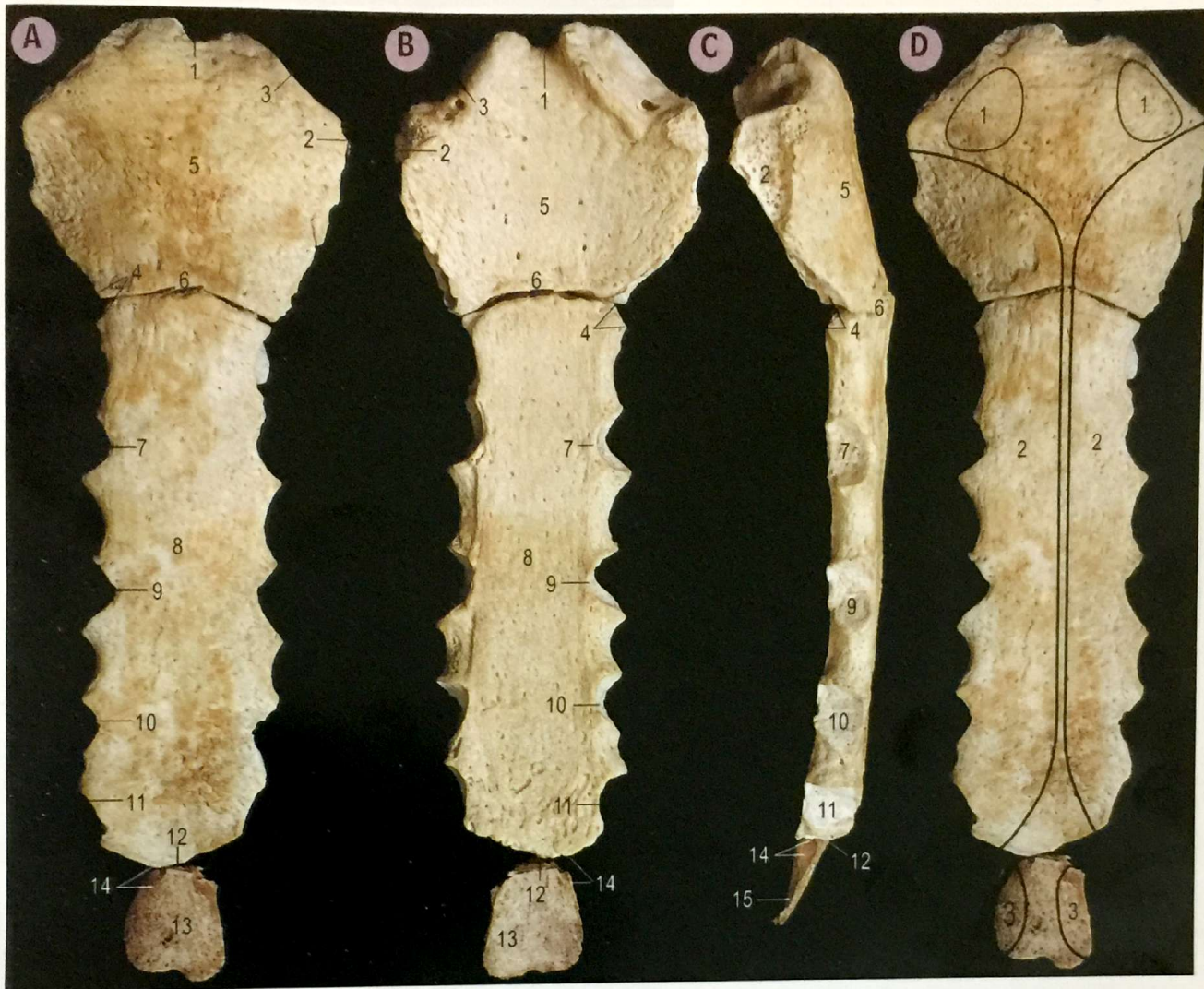
THORAX & vertebral column



DR. MOHAMED EL-FIKY
Professor of Anatomy & Embryology
Faculty of Medicine Menoufia university
EGYPT



Bony Thorax



The sternum, **A** from the front, **B** from behind, **C** from the right.

- 1 Jugular notch
- 2 Notch for first costal cartilage
- 3 Clavicular notch
- 4 Notches for second costal cartilage
- 5 Manubrium
- 6 Sternal angle and manubriosternal joint
- 7 Notch for third costal cartilage
- 8 Body
- 9 Notch for fourth costal cartilage
- 10 Notch for fifth costal cartilage
- 11 Notch for sixth costal cartilage
- 12 Xiphisternal joint
- 13 Xiphoid process
- 14 Notches for seventh costal cartilage

The sternum, **D** from the front.

- 1 Sternocleidomastoid
- 2 Pectoralis major
- 3 Rectus abdominis

The sternum, from behind.

- 1 Sternohyoid
- 2 Sternothyroid
- 3 Area covered by left pleura
- 4 Area covered by right pleura
- 5 Area in contact with pericardium
- 6 Transversus thoracis
- 7 Diaphragm



Typical ribs, from behind,

- A** the left fifth rib
(a typical upper rib)
- B** the left seventh rib
(a typical lower rib)

- 1 Non-articular part of tubercle
- 2 Neck
- 3 Crest of head
- 4 Articular facet of head
- 5 Articular facet of tubercle
- 6 Angle
- 7 Shaft
- 8 Costal groove

C Typical rib and vertebra articulated, from above.

- 1 Upper costal facet of head of rib
- 2 Upper costal facet of vertebral body
- 3 Articular part of tubercle
- 4 Neck of rib
- 5 Non-articular part of tubercle
- 6 Articular facet of transverse process





Left first rib (inner) and second rib (outer),
A from above, **B** from below.

- | | |
|-------------------------------------|----------------------------|
| 1 Superior costotransverse ligament | 8 Subclavius |
| 2 Lateral costotransverse ligament | 9 Costoclavicular ligament |
| 3 Levator costae | 10 Suprapleural membrane |
| 4 Serratus posterior superior | 11 Scalenus anterior |
| 5 Scalenus posterior | 12 Scalenus medius |
| 6 Serratus anterior | 13 Area covered by pleura |
| 7 Intercostal muscles and membranes | |



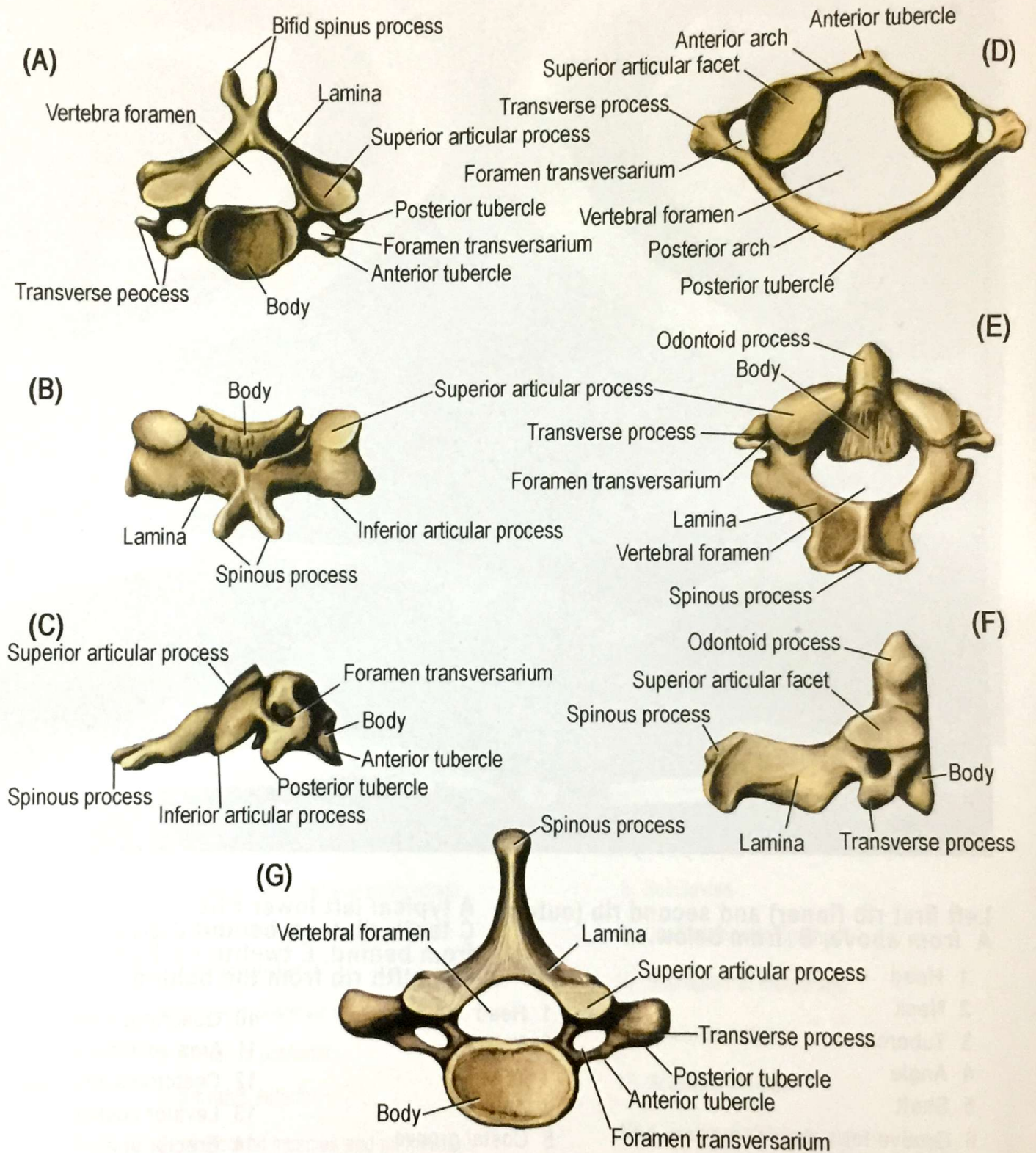
Left first rib (inner) and second rib (outer).
A from above, **B** from below.

A typical left lower ribs,
C tenth rib from behind **D** eleventh rib from behind, **E** twelfth rib from the front, **F** twelfth rib from the behind.

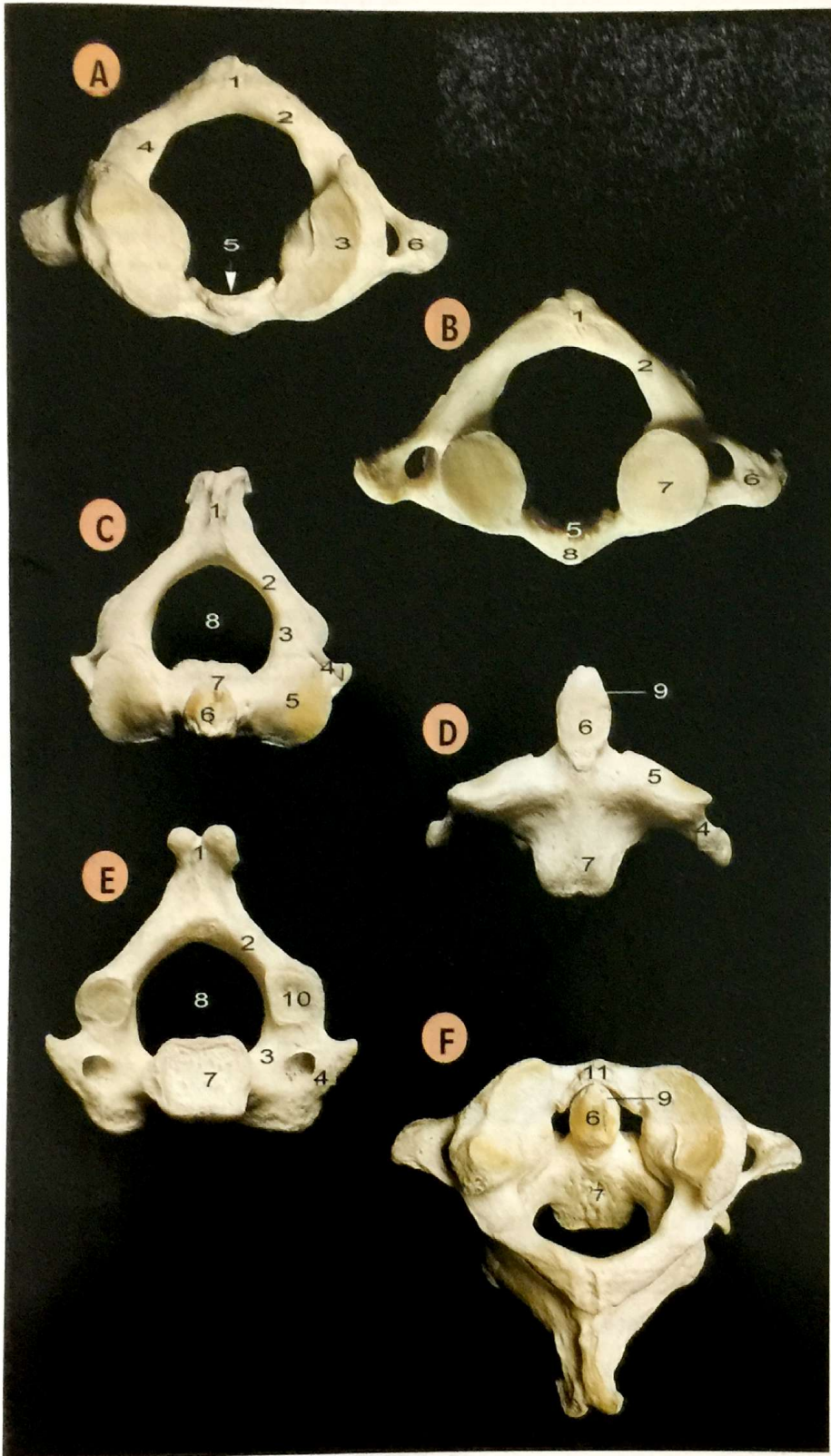
- 1 Head
- 2 Neck
- 3 Tubercle
- 4 Angle
- 5 Shaft
- 6 Groove for subclavian artery and first thoracic nerve
- 7 Serratus anterior tuberosity
- 8 Scalene tubercle
- 9 Groove for subclavian vein
- 10 Costal groove

- 1 Head
- 2 Neck
- 3 Tubercle
- 4 Angle
- 5 Costal groove
- 6 Serratus posterior inferior
- 7 Diaphragm
- 8 Line of pleural reflexion
- 9 Internal intercostal

- 10 Quadratus lumborum
- 11 Area covered by pleura
- 12 Costotransverse ligament
- 13 Levator costae
- 14 Erector spinae
- 15 External intercostal
- 16 Latissimus dorsi
- 17 External oblique



Cervical vertebrae. A,B,C. Typical cervical vertebra (fourth). D. Atlas. E,F. Axis. G. Seventh cervical vertebra.



Atlas

(First cervical vertebra),

A from above,

B from below

- 1 Posterior tubercle
- 2 Posterior arch
- 3 Lateral mass with superior articular facet
- 4 Groove for vertebral artery
- 5 Facet for dens of axis
- 6 Transverse process and foramen
- 7 Lateral mass with inferior articular facet
- 8 Anterior arch and tubercle

Axis

(second cervical vertebra)

C from above

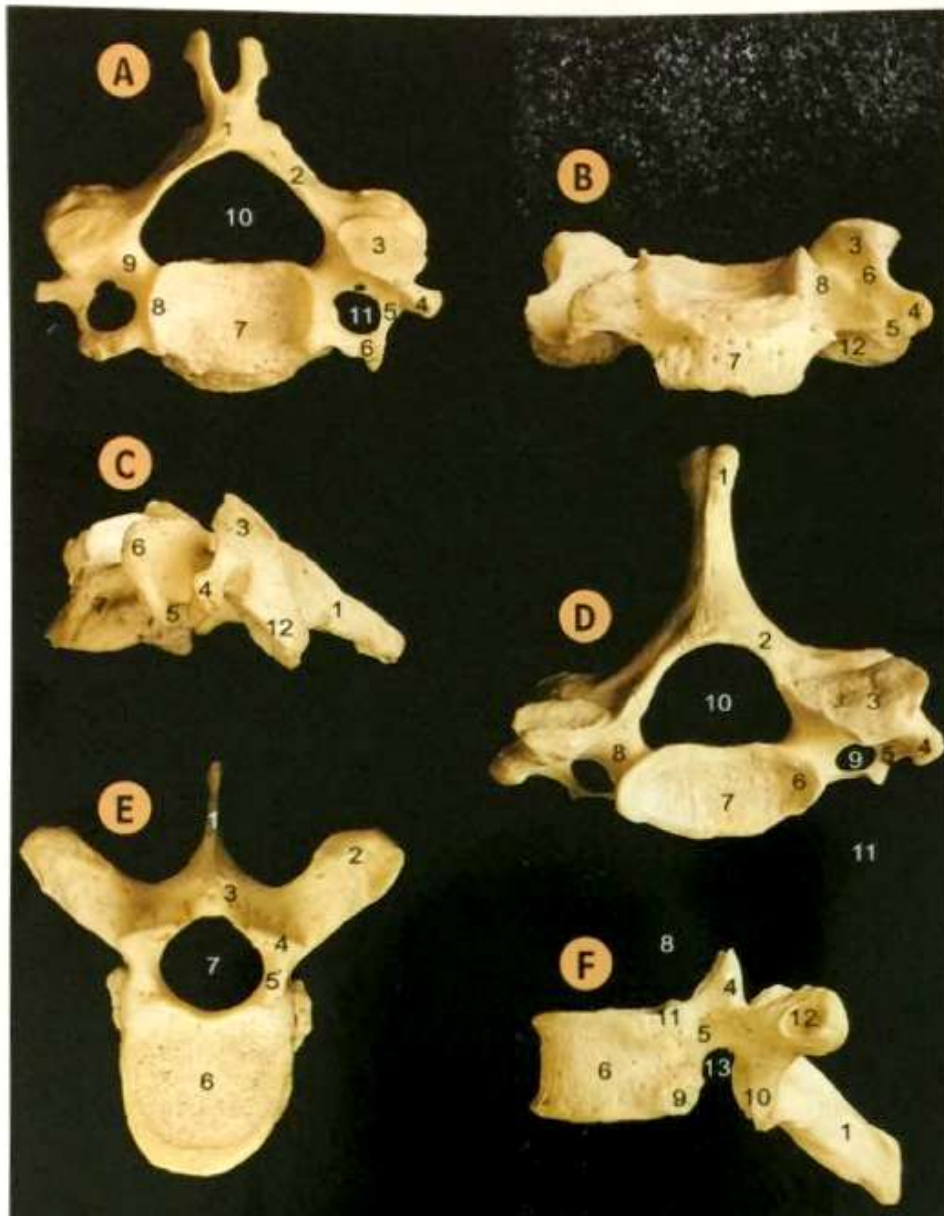
D from the front,

E from the below

F articulated with the atlas, from above and behind.

- 1 Bifid spinous process
- 2 Lamina
- 3 Pedicle
- 4 Transverse process and foramen
- 5 Superior articular surface
- 6 Dens
- 7 Body
- 8 Vertebral foramen
- 9 Impression for alar ligament
- 10 Inferior articular process
- 11 Anterior arch of atlas

Fifth cervical vertebra
(a typical cervical vertebra),
A from above, B from the front,
C from the left.

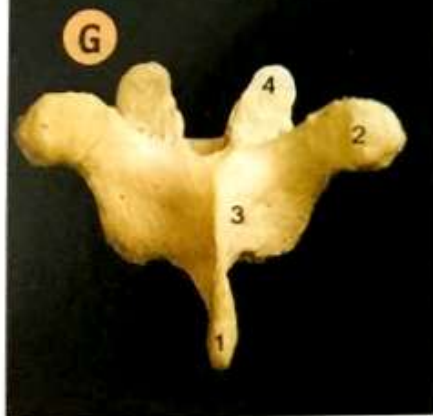


- 1 Bifid spinous process
- 2 Lamina
- 3 Superior articular process
- 4 Posterior tubercle of transverse process
- 5 Intertubercular lamella of transverse process
- 6 Anterior tubercle of transverse process
- 7 Body
- 8 Posterolateral lip (uncus)
- 9 Pedicle
- 10 Vertebral foramen
- 11 Foramen of transverse process
- 12 Inferior articular process

D seventh cervical vertebra
(vertebra prominens),
from above.

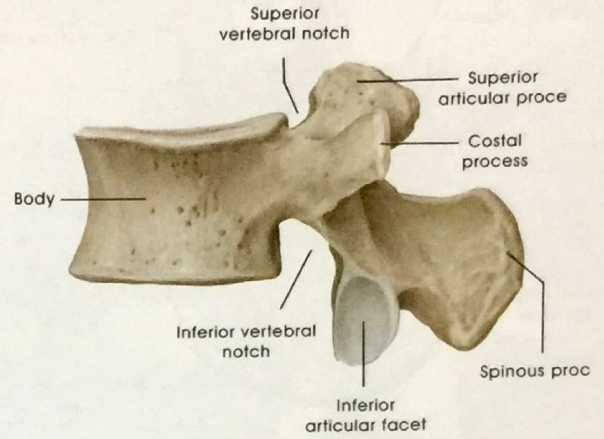
- 1 Spinous process with tubercle
- 2 Lamina
- 3 Superior articular process
- 4 Posterior tubercle of transverse process
- 5 Intertubercular lamella of transverse process
- 6 Posterolateral lip (uncus)
- 7 Body
- 8 Pedicle
- 9 Foramen of transverse process
- 10 Vertebral foramen
- 11 Superior articular process

Seventh thoracic vertebra (typical),
E from above, F from the left, G from behind.

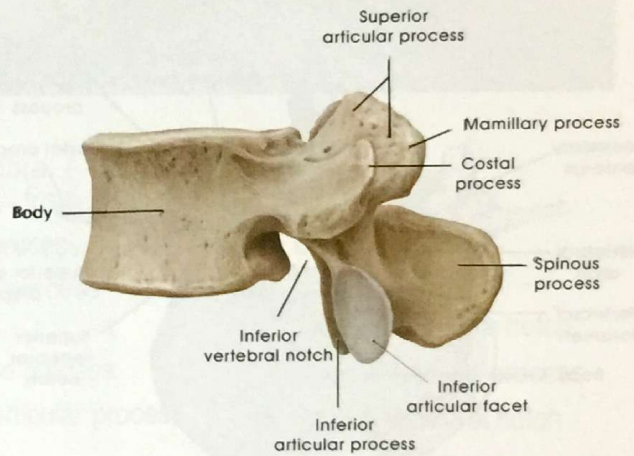


- 1 Spinous process
- 2 Transverse process
- 3 Lamina
- 4 Superior articular process
- 5 Pedicle
- 6 Body
- 7 Vertebral foramen
- 8 Superior vertebral notch
- 9 Inferior costal facet
- 10 Inferior articular process
- 11 Superior costal facet
- 12 Costal facet of transverse process
- 13 Inferior vertebral notch

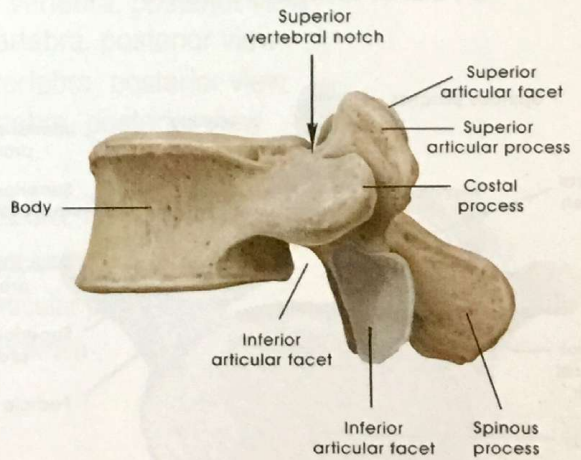
The Lumbar vertebrae



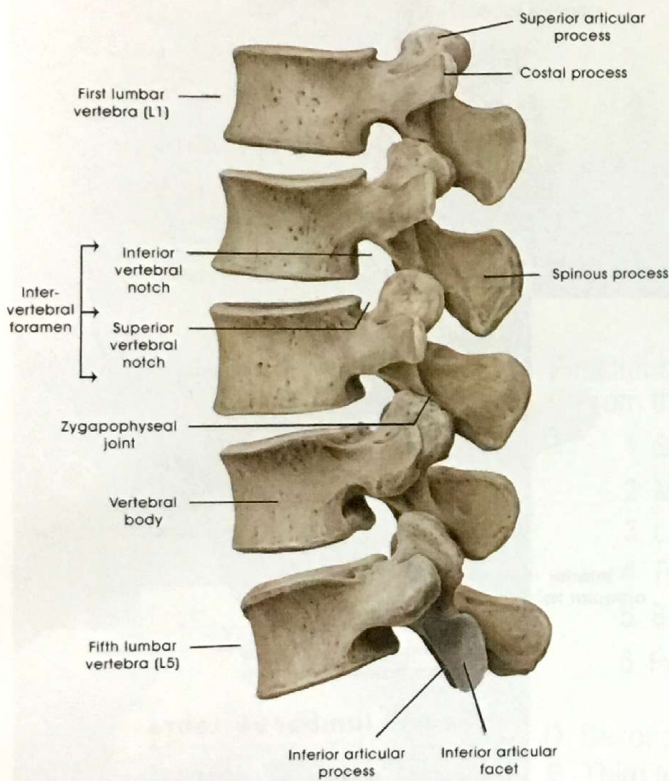
a Second lumbar vertebra



b Fourth lumbar vertebra

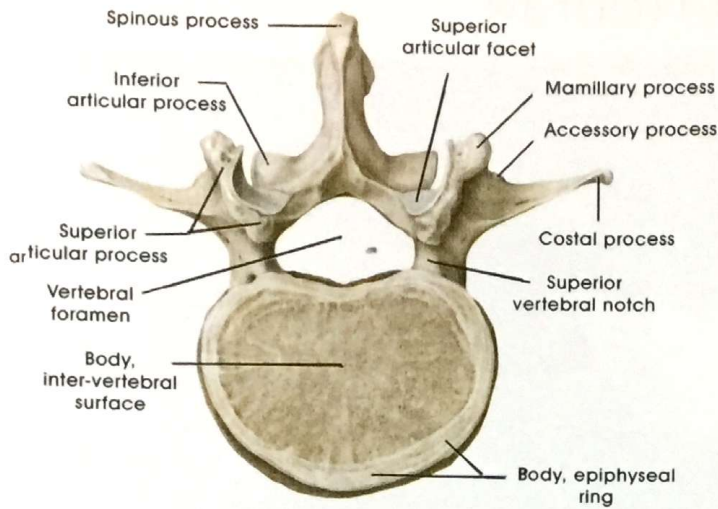


c Fifth lumbar vertebra



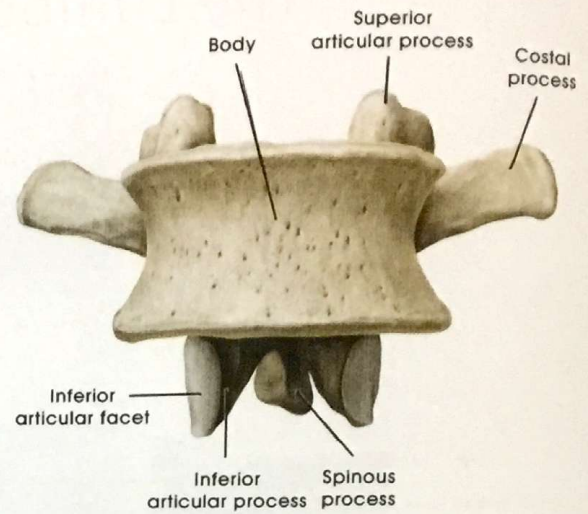
A Lumbar spine, left lateral view

Lumbar vertebrae, superior view

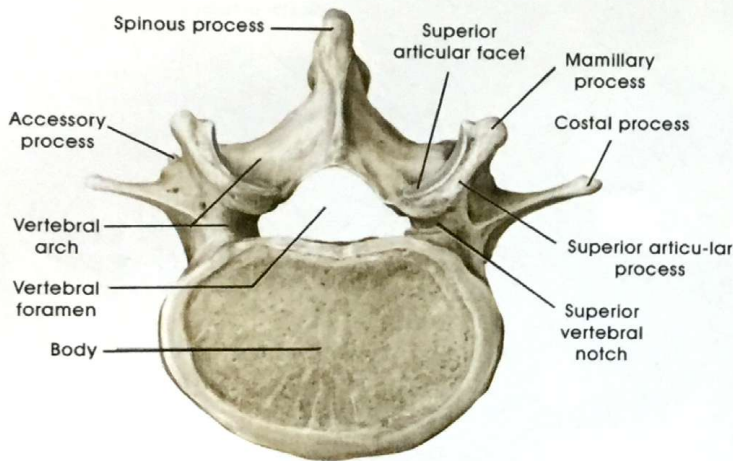


a Second lumbar vertebra

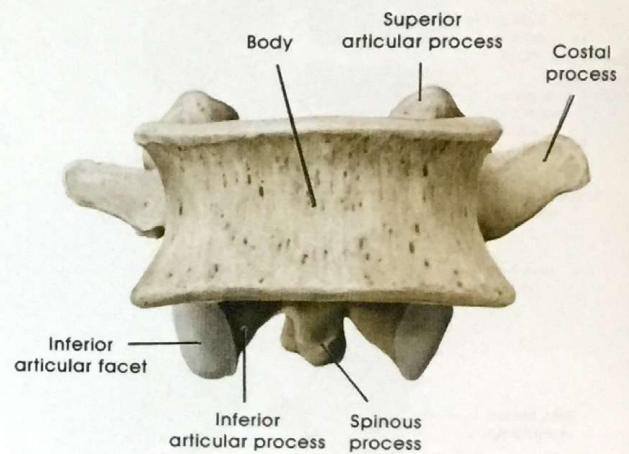
Lumbar vertebrae, anterior view



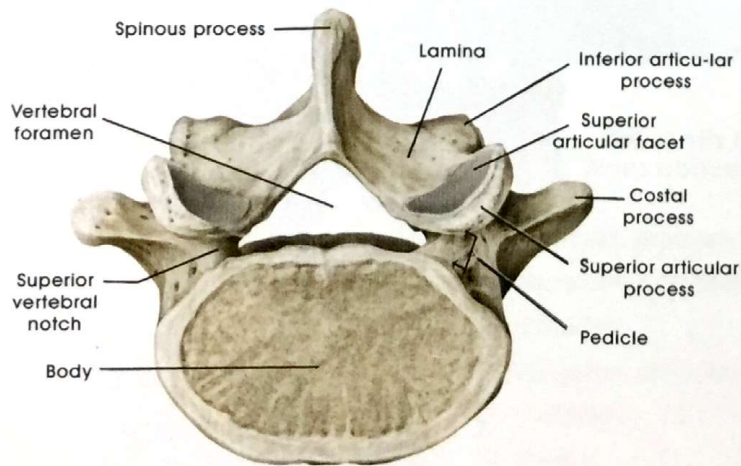
a Second lumbar vertebra



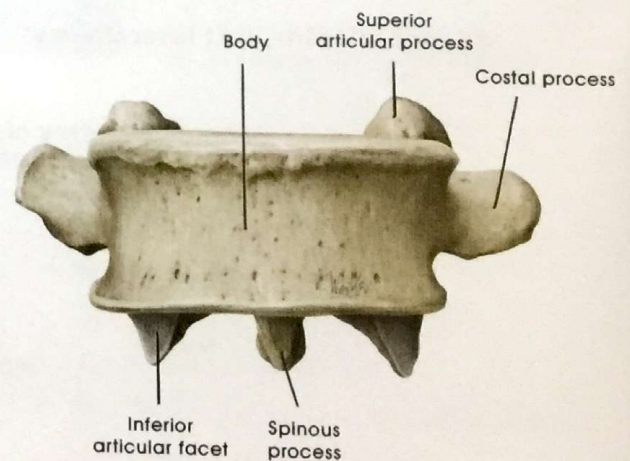
b Fourth lumbar vertebra



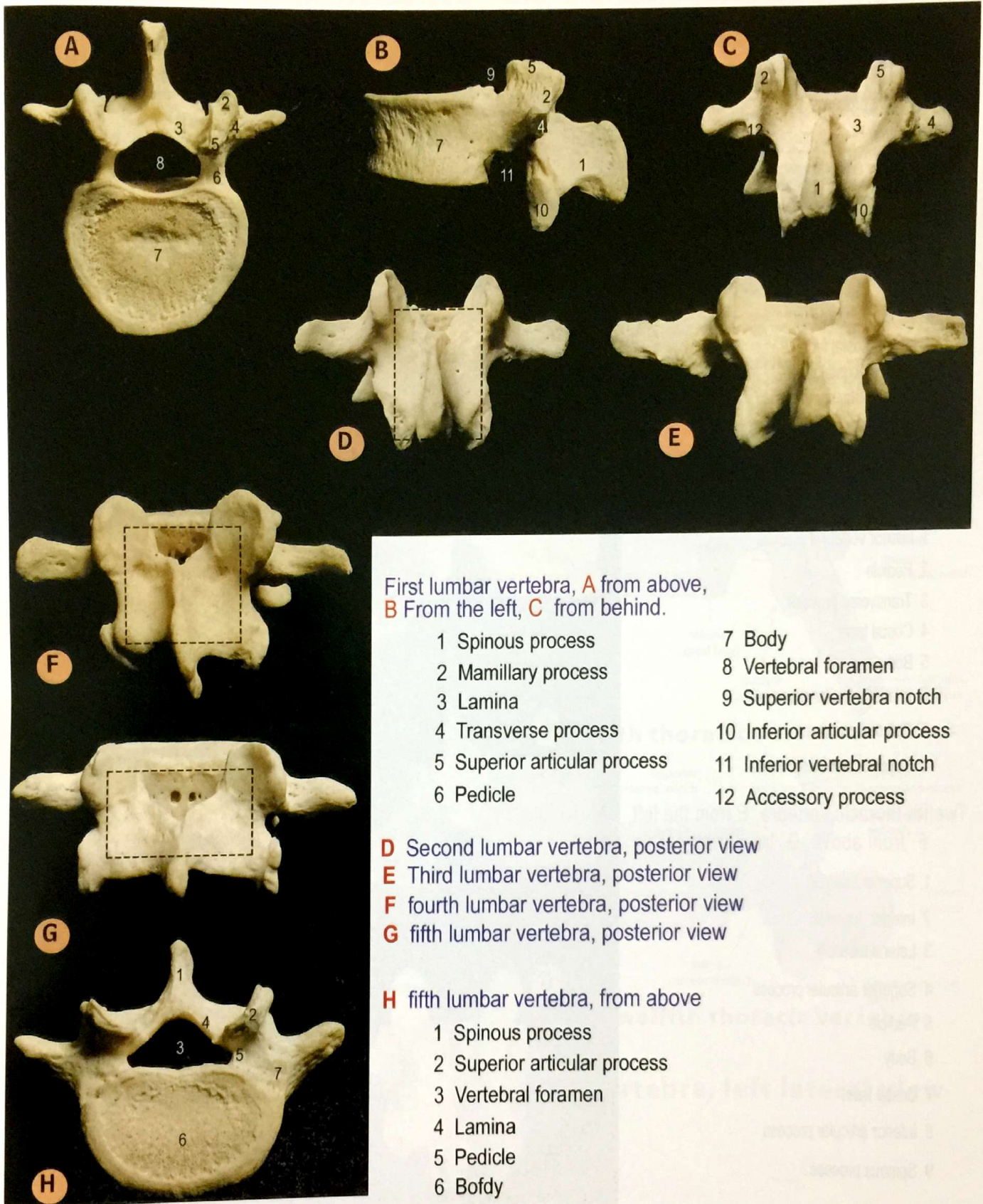
b Fourth lumbar vertebra



C Fifth lumbar vertebra



C Fifth lumbar vertebra



First lumbar vertebra, **A** from above, **B** From the left, **C** from behind.

- | | |
|------------------------------|-------------------------------|
| 1 Spinous process | 7 Body |
| 2 Mamillary process | 8 Vertebral foramen |
| 3 Lamina | 9 Superior vertebral notch |
| 4 Transverse process | 10 Inferior articular process |
| 5 Superior articular process | 11 Inferior vertebral notch |
| 6 Pedicle | 12 Accessory process |

D Second lumbar vertebra, posterior view

E Third lumbar vertebra, posterior view

F fourth lumbar vertebra, posterior view

G fifth lumbar vertebra, posterior view

H fifth lumbar vertebra, from above

- | |
|---|
| 1 Spinous process |
| 2 Superior articular process |
| 3 Vertebral foramen |
| 4 Lamina |
| 5 Pedicle |
| 6 Body |
| 7 Transverse process fusing with pedicle and body |

First thoracic vertebra,

A from above,

B from the front and the left.

- 1 Spinous process
- 2 Lamina
- 3 Superior articular process
- 4 Transverse process with costal facet
- 5 Posterolateral lip (uncus)
- 6 Pedicle
- 7 Body
- 8 Vertebral foramen
- 9 Inferior costal facet
- 10 Superior costal facet
- 11 Inferior articular process

Tenth thoracic vertebra, **C**

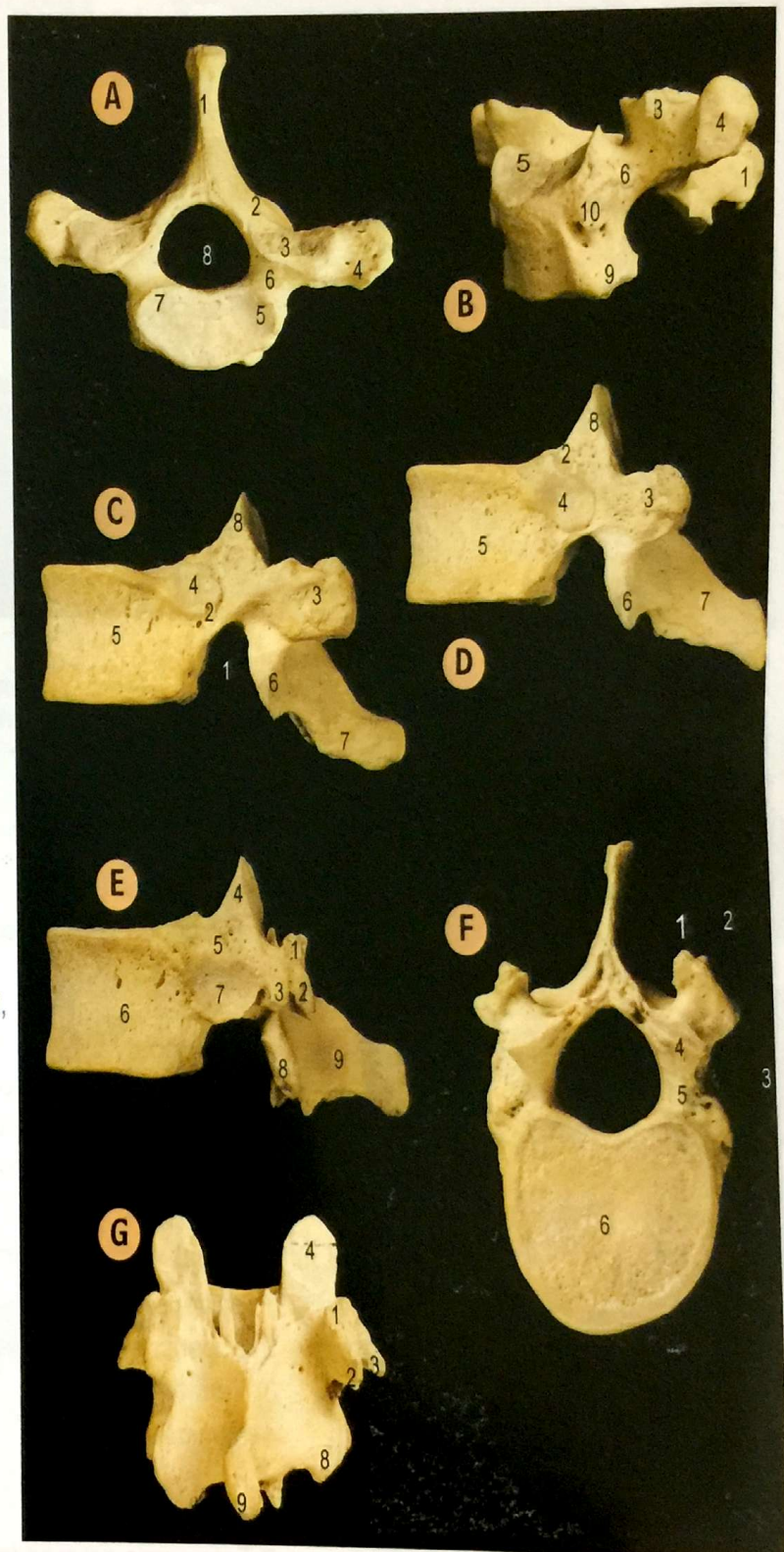
Eleventh thoracic vertebra, **D**,
from the left.

- 1 Inferior vertebral process
- 2 Pedicle
- 3 Transverse process
- 4 Costal facet
- 5 Body
- 6 Inferior articular process
- 7 Spinous process
- 8 Superior articular process

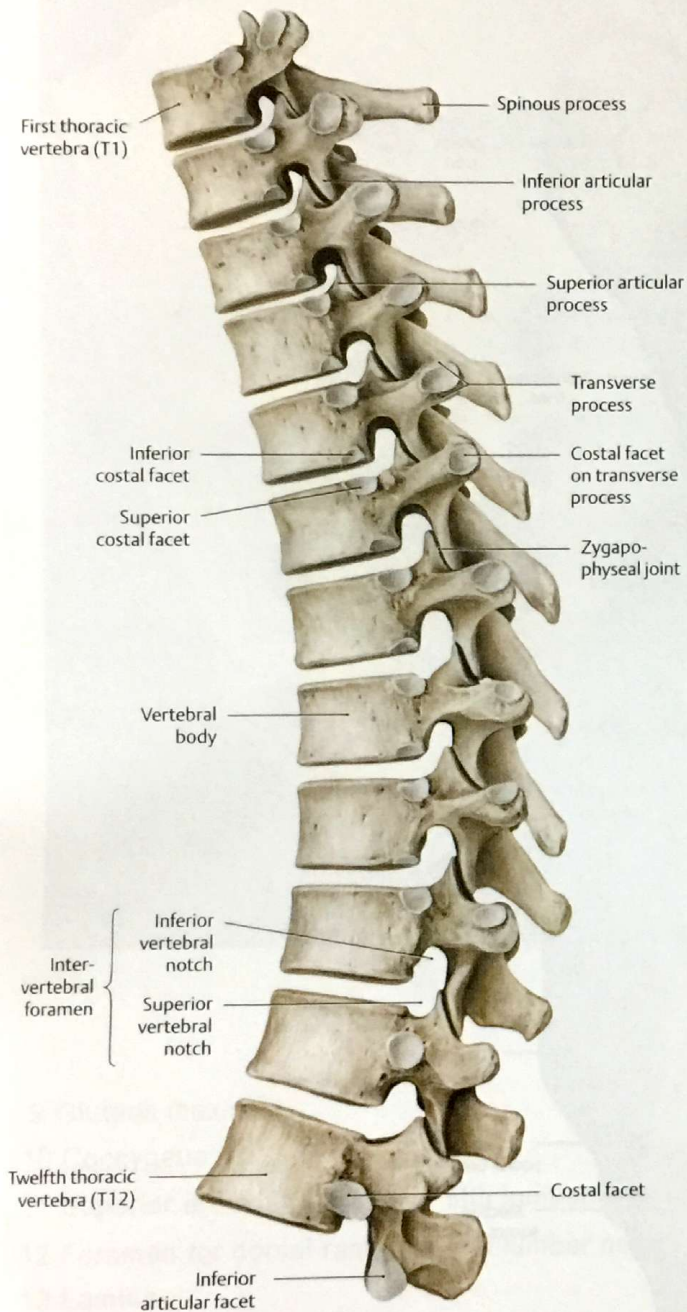
Twelfth thoracic vertebra, **E** from the left,

F from above, **G** from behind.

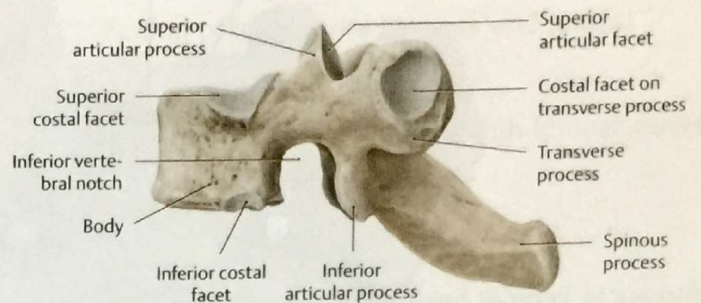
- 1 Superior tubercle
- 2 Inferior tubercle
- 3 Lateral tubercle
- 4 Superior articular process
- 5 Pedicle
- 6 Body
- 7 Costal facet
- 8 Inferior articular process
- 9 Spinous process



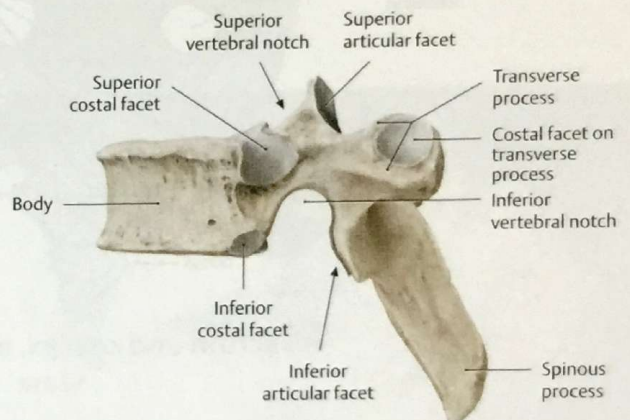
The thoracic vertebrae



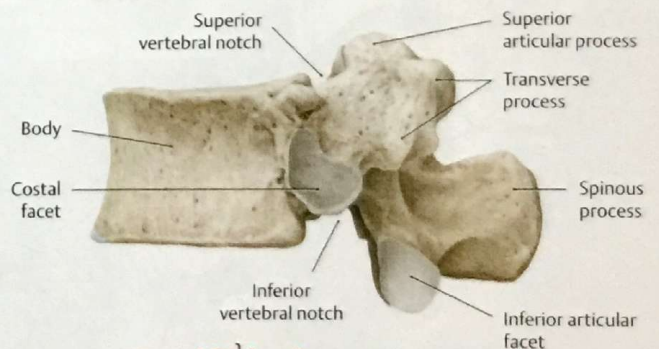
, Thoracic vertebra left lateral view



a Second thoracic vertebra



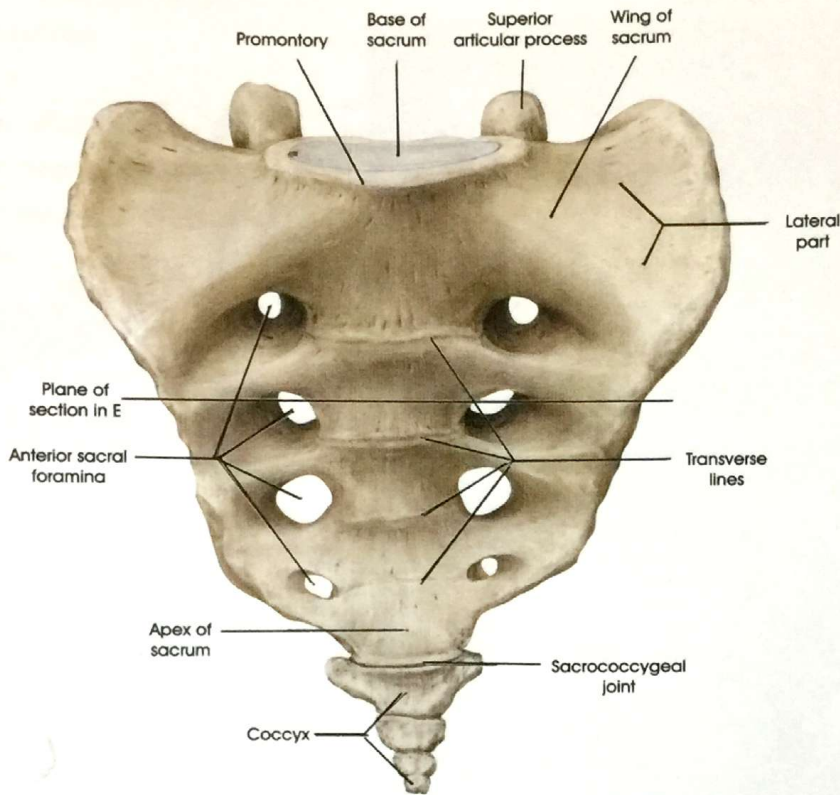
b sixth thoracic vertebra



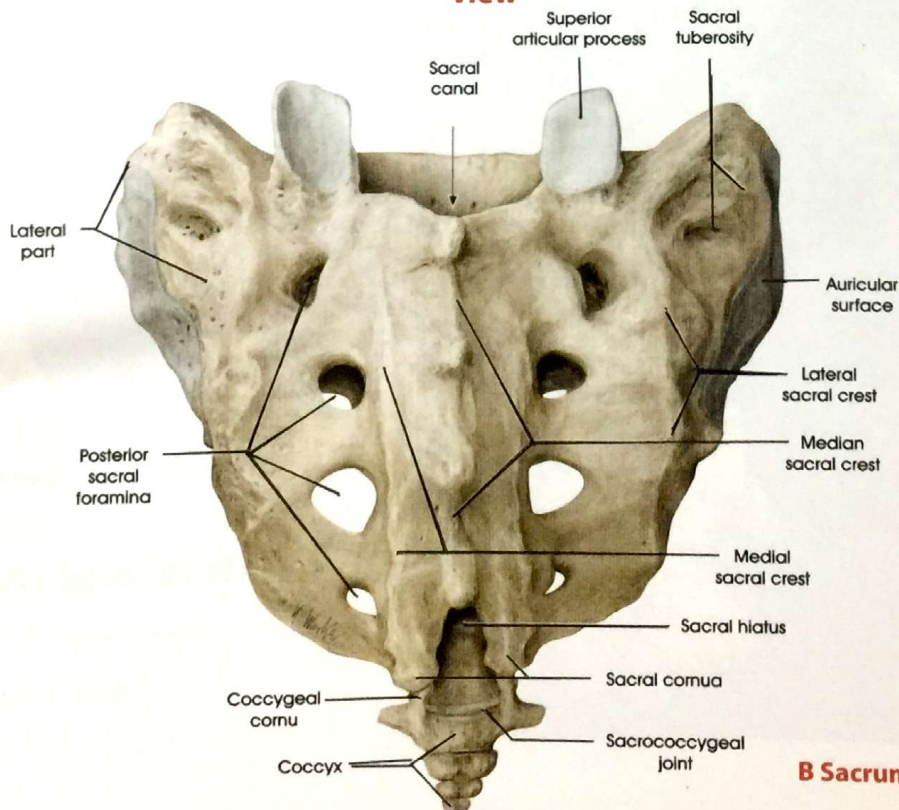
c Twelfth thoracic vertebra

Thoracic vertebra, left lateral view

The Sacrum and Coccyx



A sacrum and coccyx, anterior (pelvic) view



B Sacrum and coccyx, posterior (dorsal) view

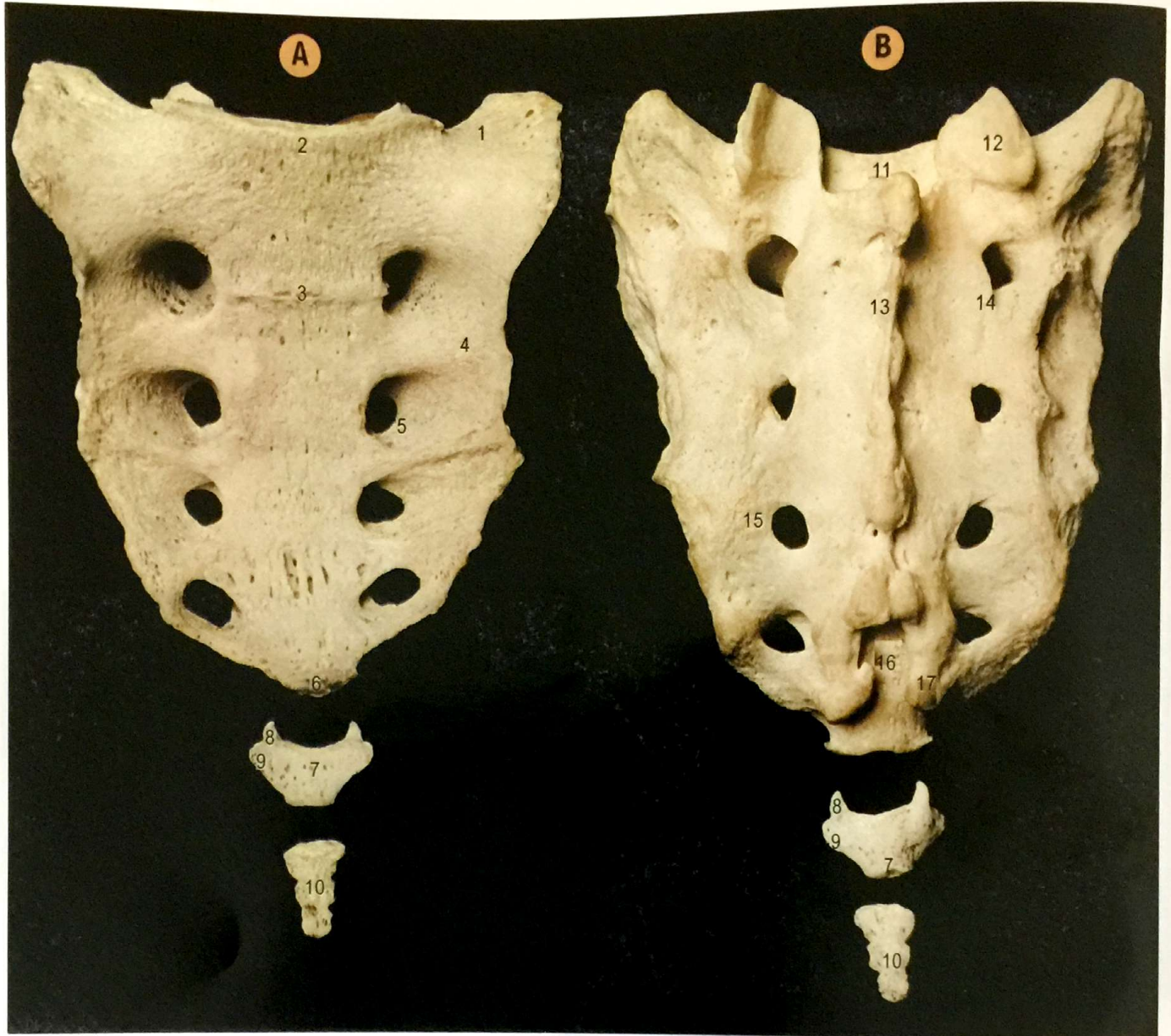
Sacrum and coccyx

Sacrum with sacralization of the fifth lumbar vertebra, **B** dorsal surface, and sacral muscle attachments, **A** pelvic surface.

- 1 Fusion of transverse process and lateral part of sacrum
- 2 Body of fifth lumbar vertebra
- 3 foramen for ventral ramus of fifth lumbar nerve
- 4 first pelvic sacral foramen
- 5 Iliacus
- 6 Piriformis
- 7 First coccygeal vertebra fused to apex of sacrum
- 8 Erector spinae



- 9 Gluteus maximus
- 10 Coccygeus
- 11 Superior articular process of fifth lumbar vertebra
- 12 Foramen for dorsal ramus of fifth lumbar nerve
- 13 Lamina
- 14 Spinous process of fifth lumbar vertebra
- 15 Sacral canal
- 16 First dorsal sacral foramen



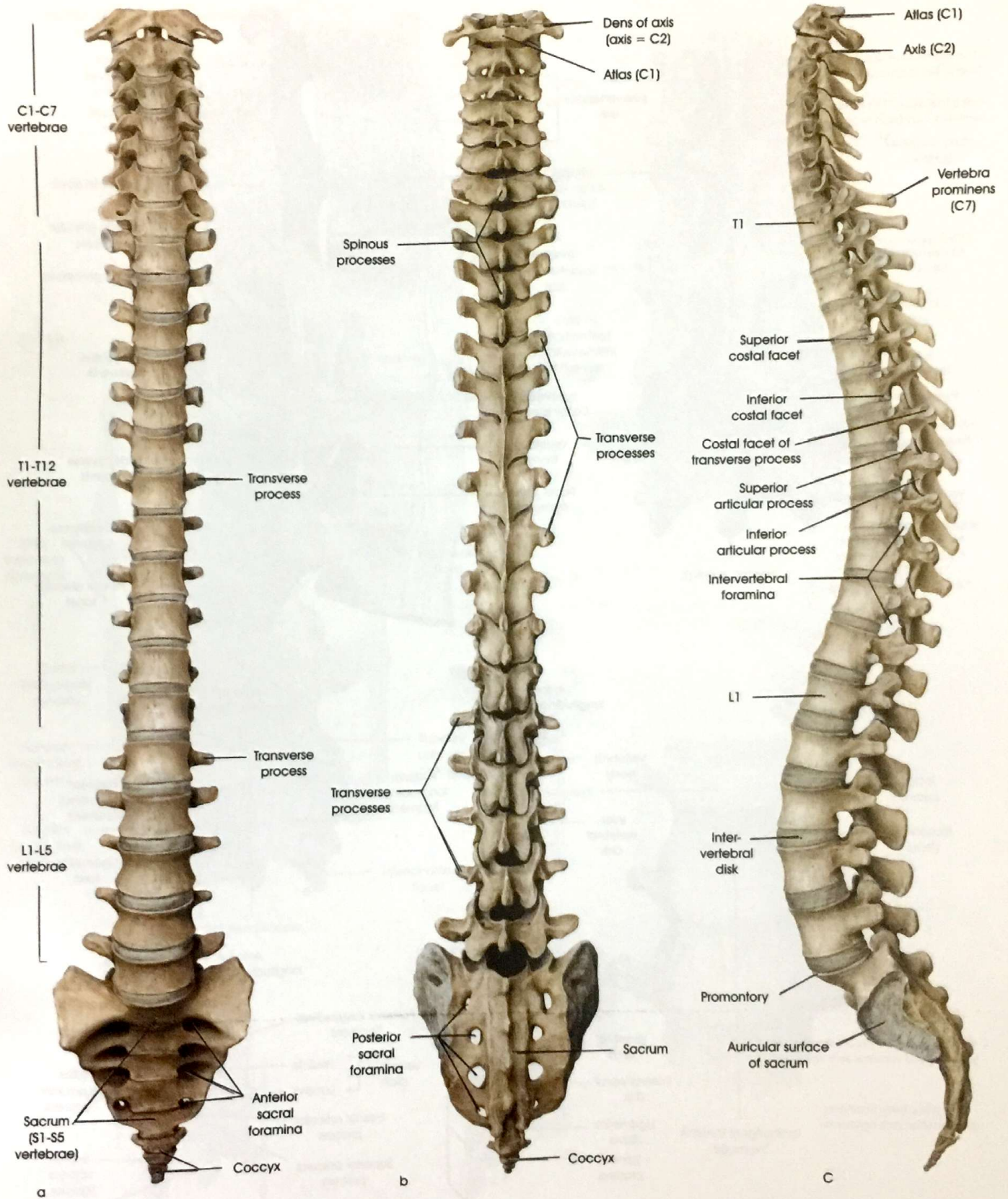
Sacrum and coccyx

A pelvic surface, B dorsal surface

- 1 Upper surface of lateral part (ala)
- 2 Promontory
- 3 Site of fusion of first and second sacral vertebrae
- 4 Lateral part
- 5 Second pelvic sacral foramen
- 6 Facet for coccyx
- 7 First coccygeal vertebra
- 8 Coccygeal cornu

- 9 Transverse process
- 10 Fused second to fourth vertebrae
- 11 Sacral canal
- 12 Superior articular process
- 13 Intermediate sacral process
- 14 Intermediate sacral process
- 15 Third dorsal sacral foramen
- 16 Sacral hiatus
- 17 Sacral cornu

The bony vertebral column

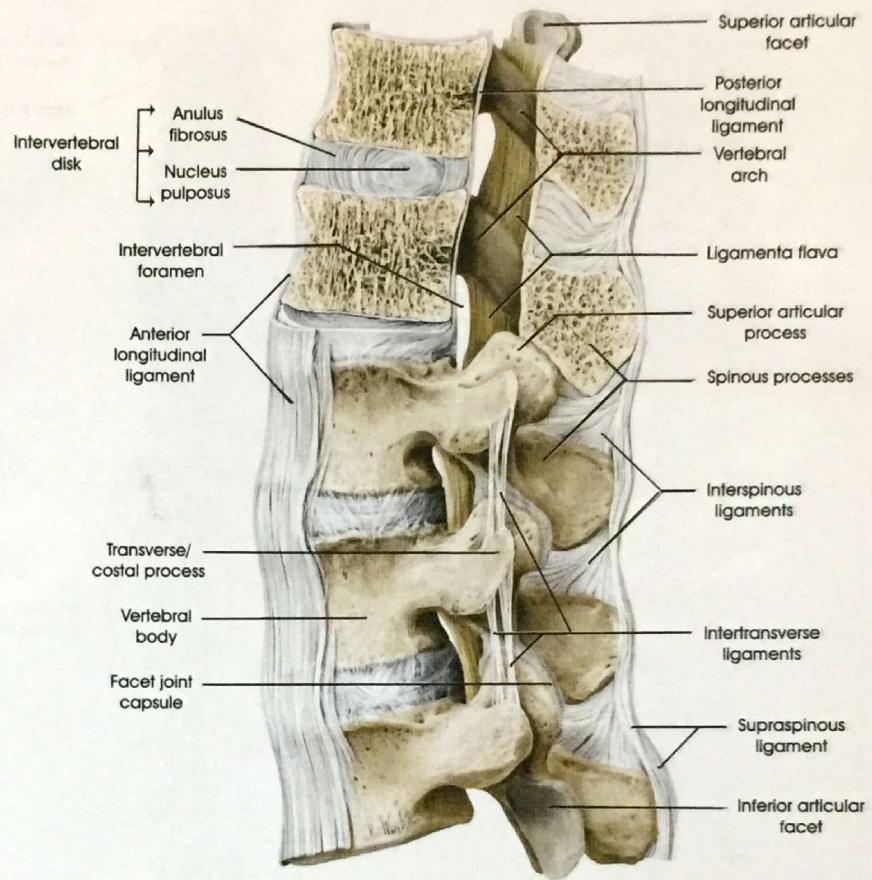


a Anterior view, b Posterior view, c left lateral view.

The Ligaments of the vertebral column

A The ligaments of the vertebral column at the level of the thoracolumbar junction (T11-L3)

Left lateral view. The two uppermost thoracic vertebrae have been sectioned in the midsagittal plane.



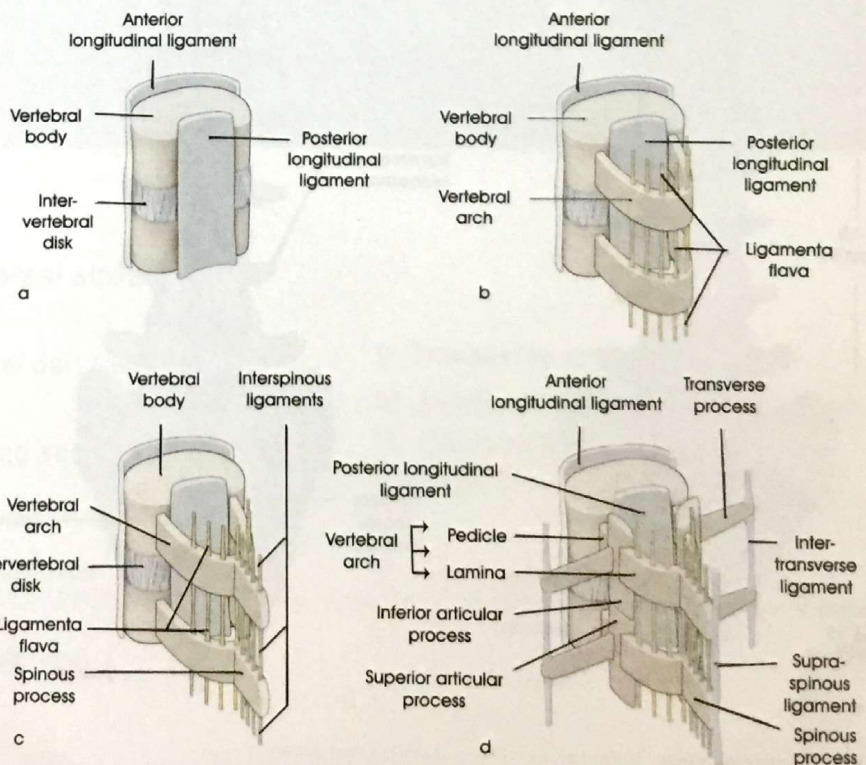
B The ligaments of the spinal column

Vertebral body ligaments

- * Anterior longitudinal ligaments
- * Posterior longitudinal ligament

Vertebral arch ligaments

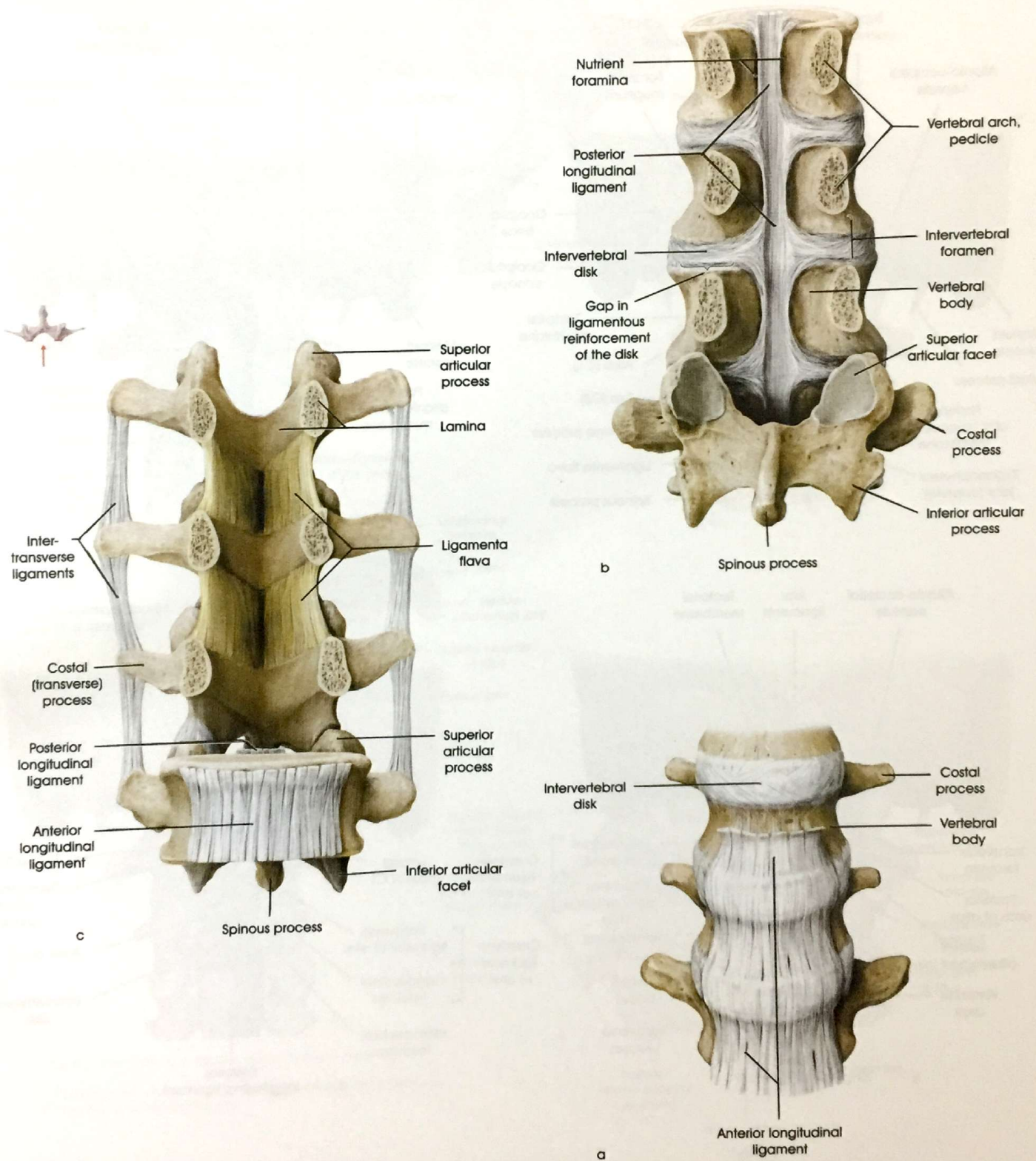
- * Ligamenta flava
- * Interspinous ligaments
- * Supraspinous ligament
- * Nuchal ligament*
- * Intertransverse ligaments



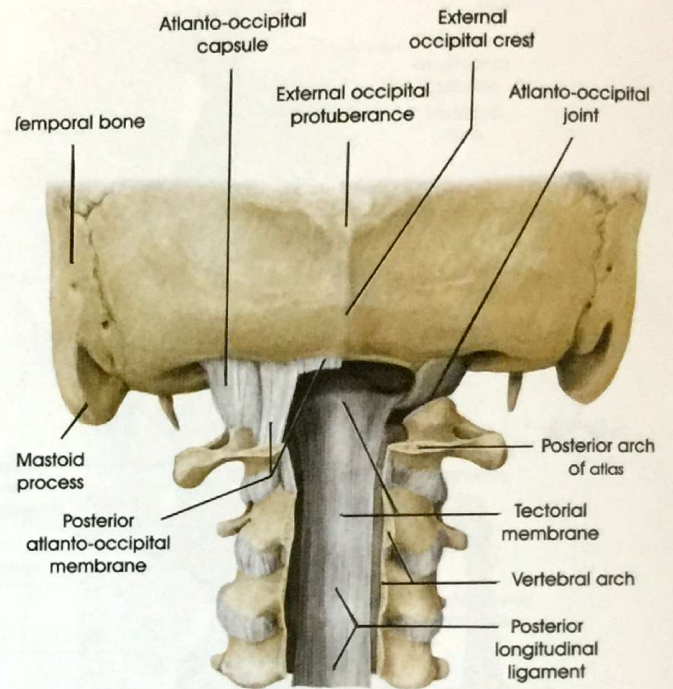
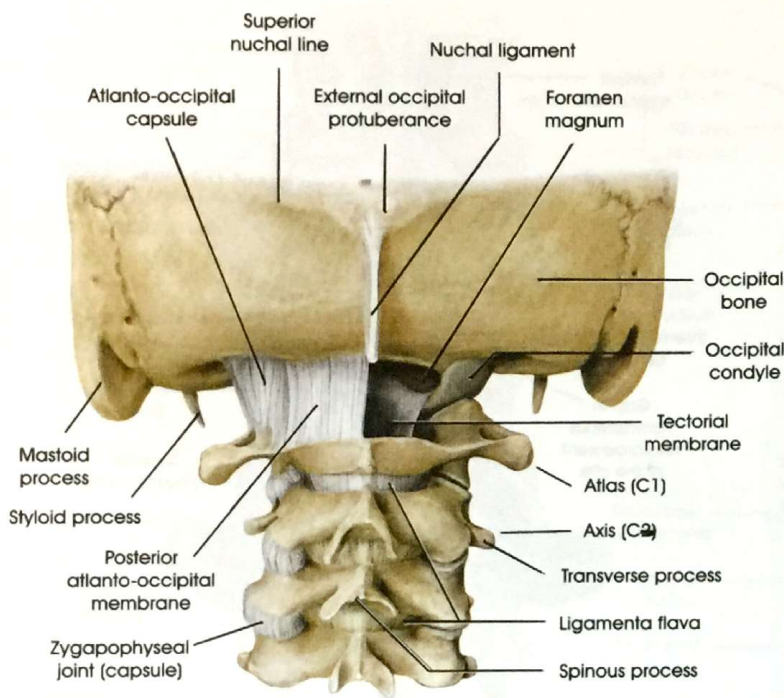
C Schematic representation of the vertebral body and vertebral arch ligaments

a Vertebral body ligaments.
b-d Vertebral arch ligaments.

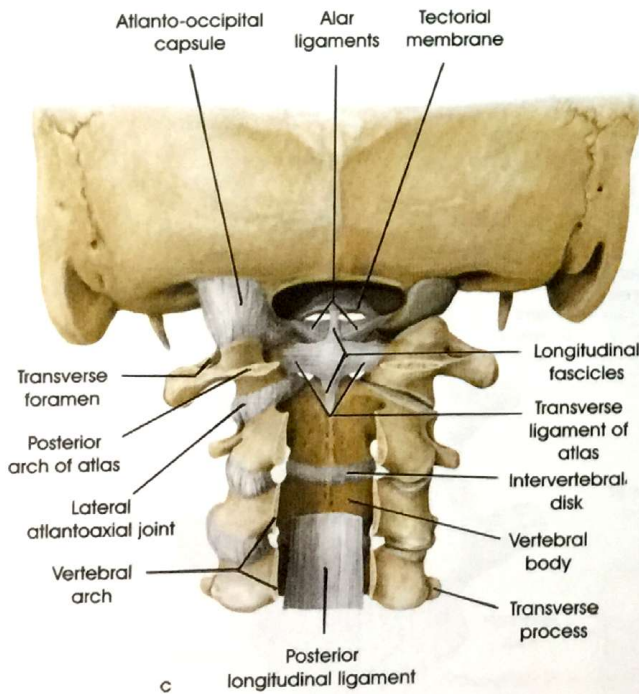
The Ligaments of the vertebral column



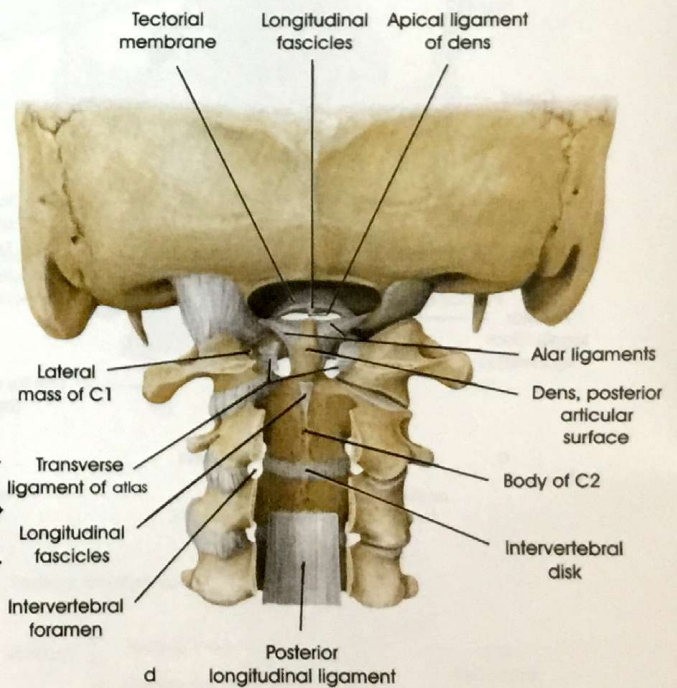
The Ligaments of the upper cervical vertebrae



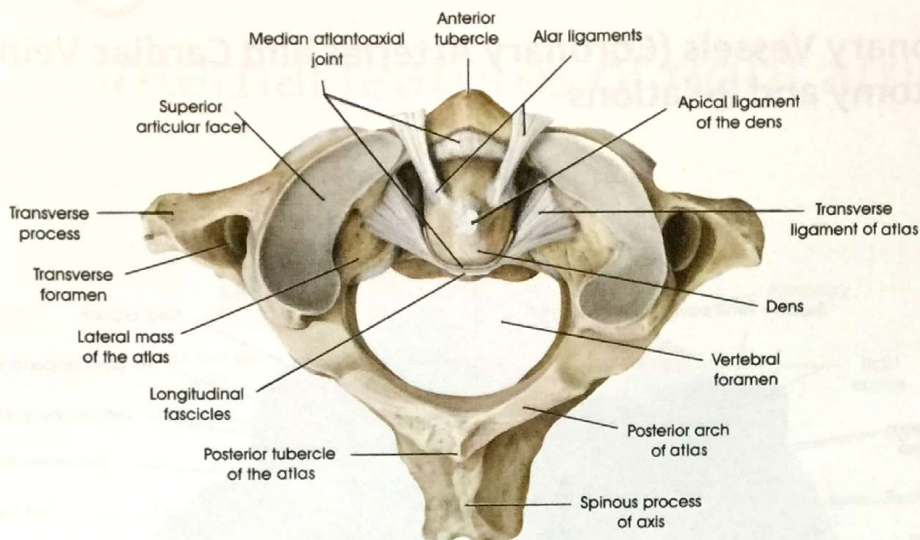
b



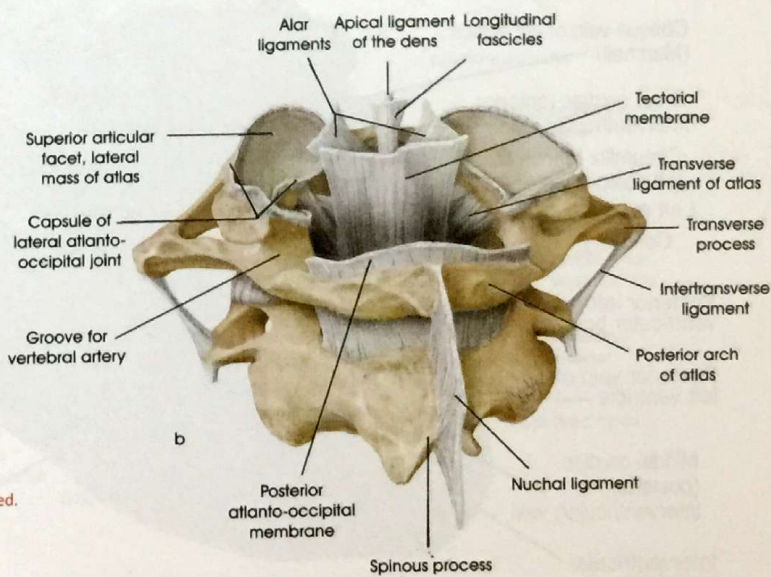
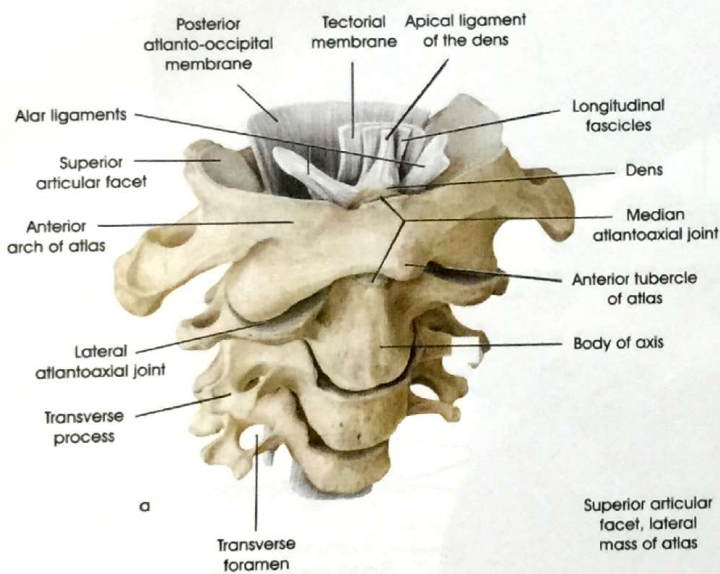
c



d



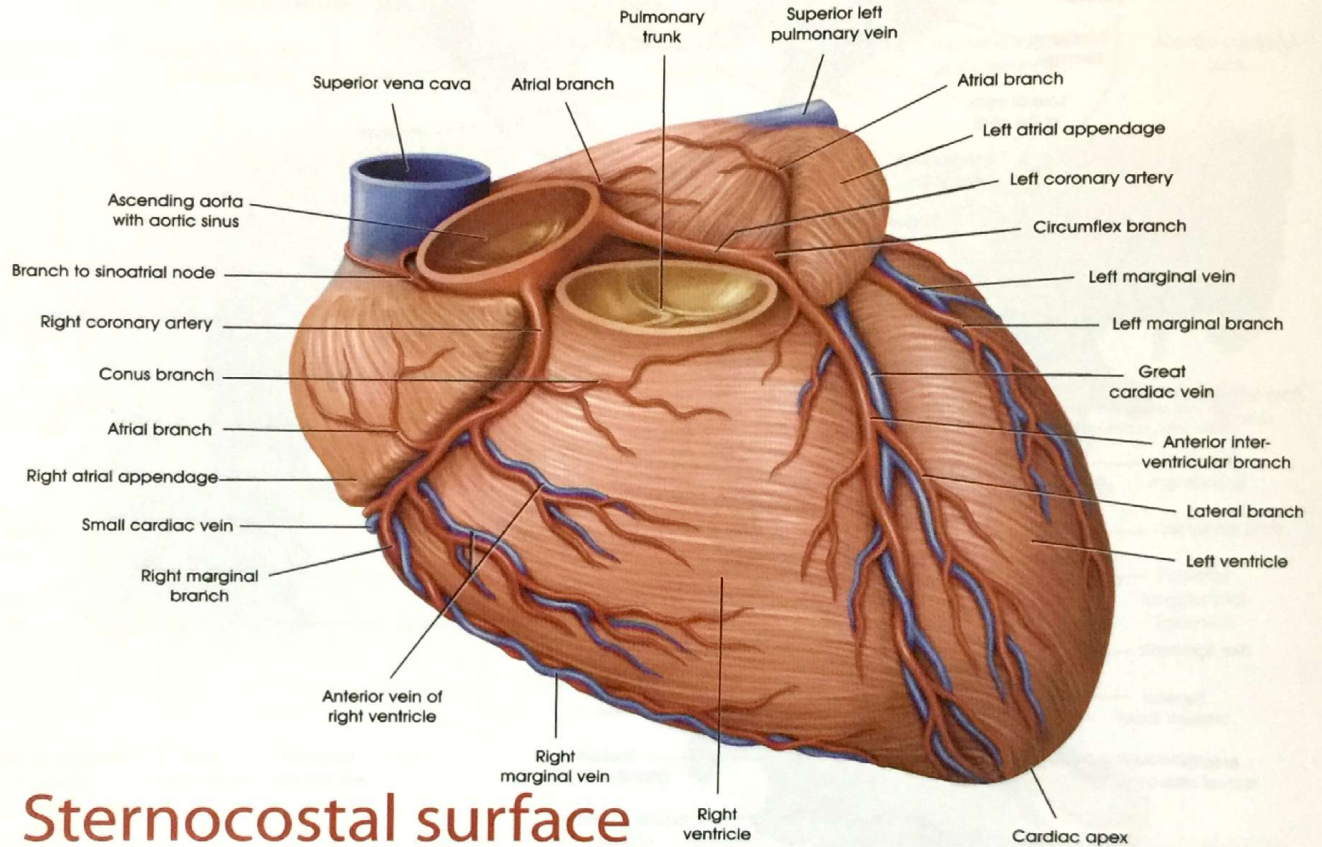
B The ligaments of the median atlantoaxial joint
Atlas and axis, superior view. (The fovea, while part of the median atlantoaxial joint, is hidden by the joint capsule.)



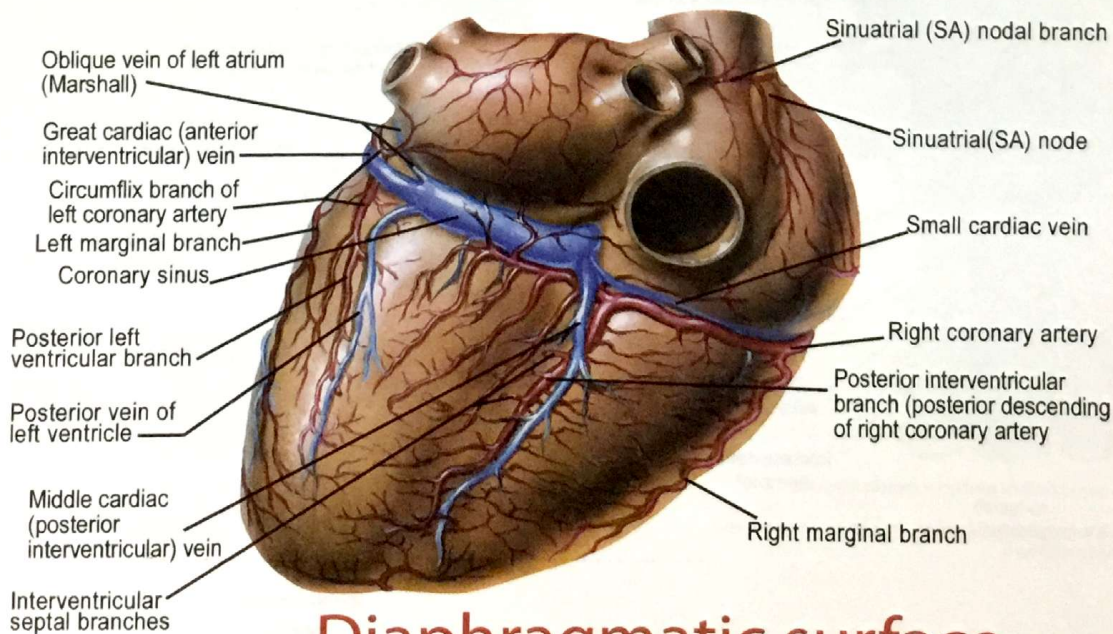
C The ligaments of the craniocervical joint (joint capsule removed)

a Proximal cervical spine, anterosuperior view with the joint capsule removed.
b Atlas and axis, posterosuperior view.

Coronary Vessels (Coronary Arteries and Cardiac Veins): Anatomy and Relations

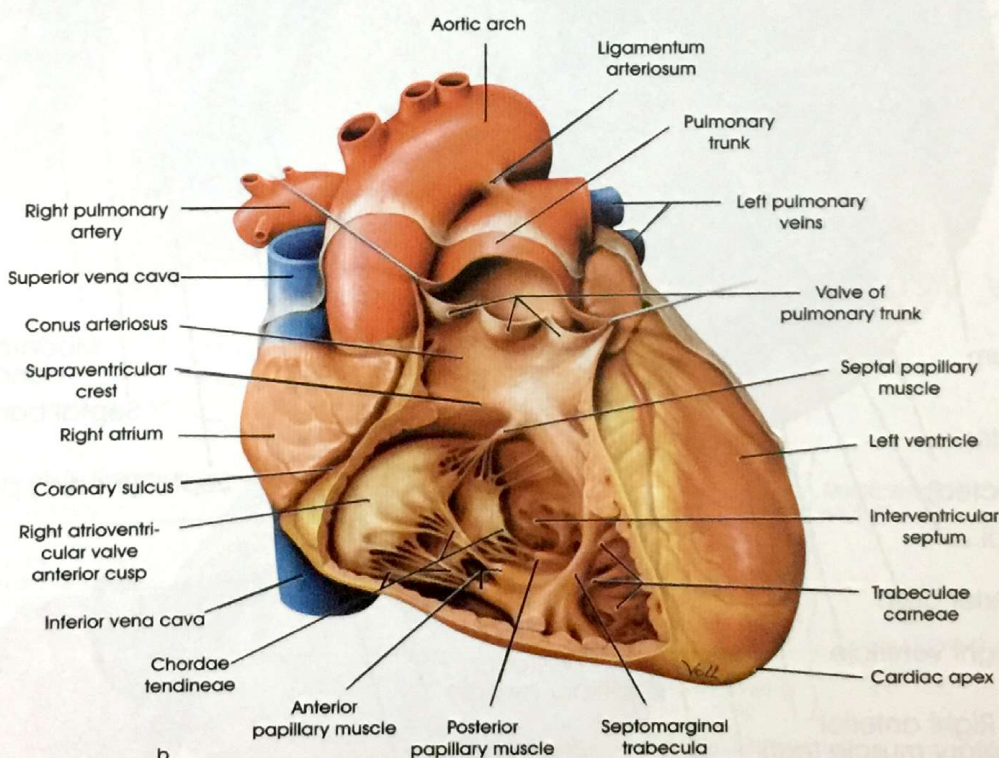
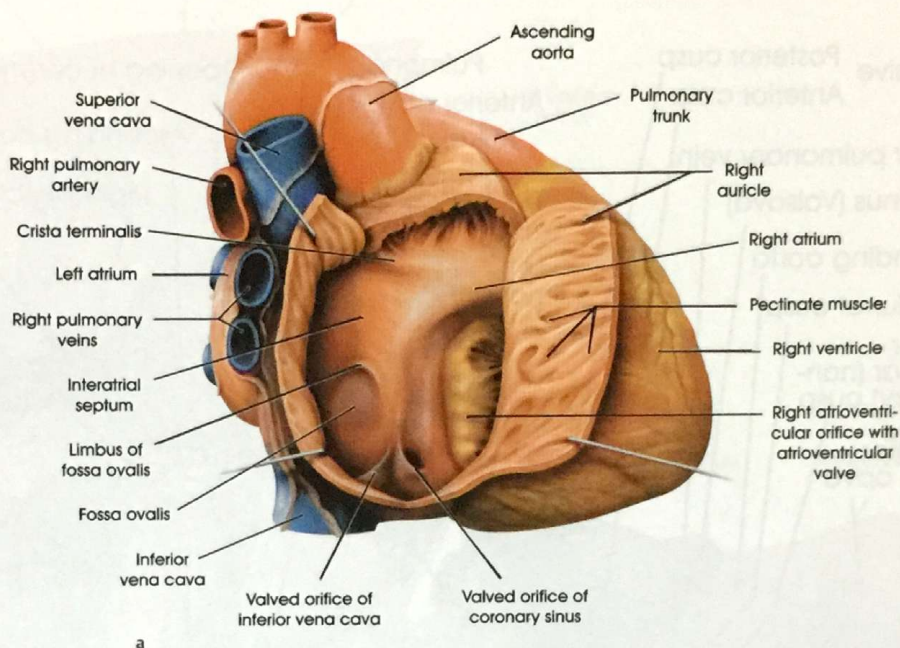


Sternocostal surface



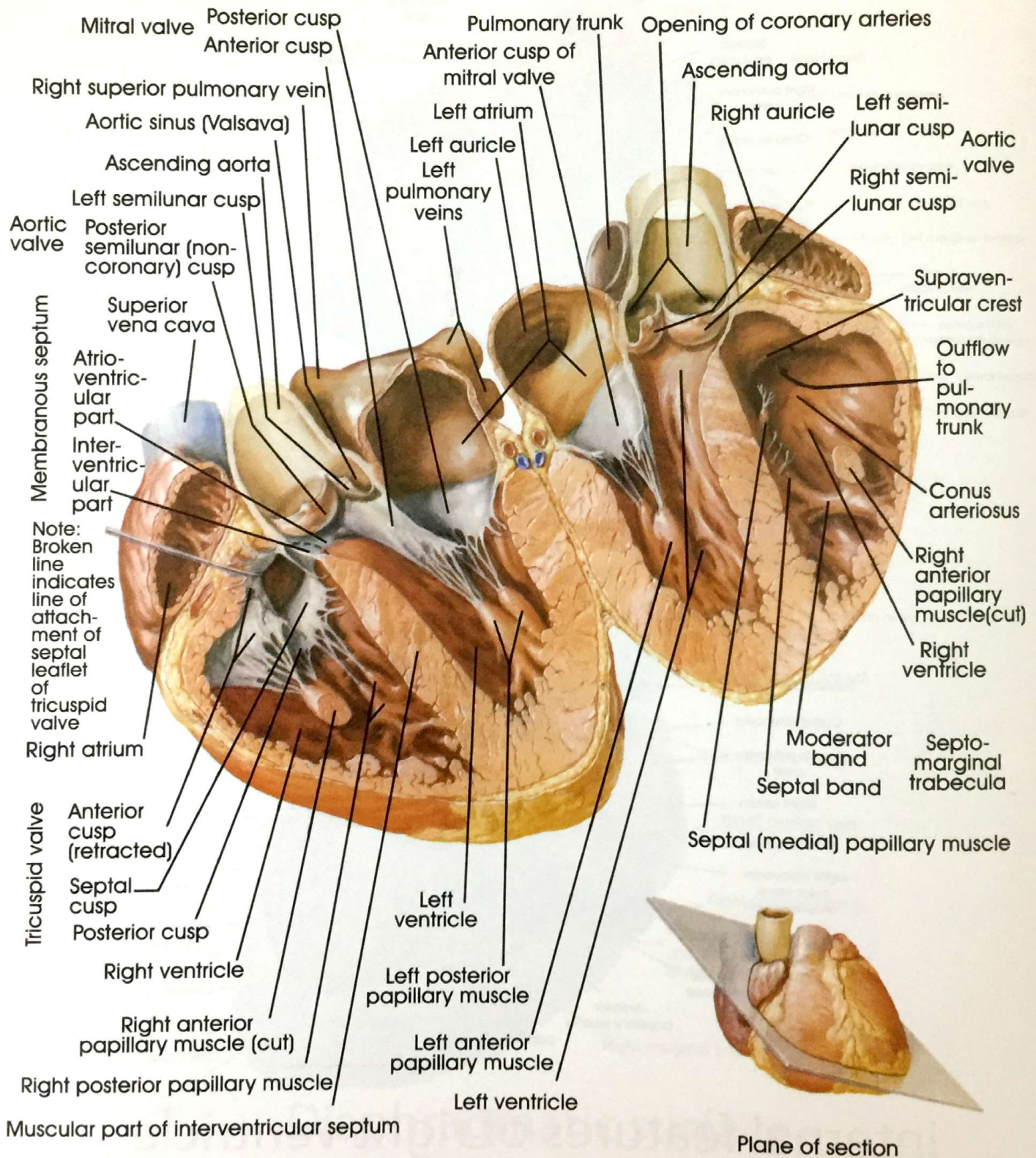
Diaphragmatic surface

Internal features of right atrium

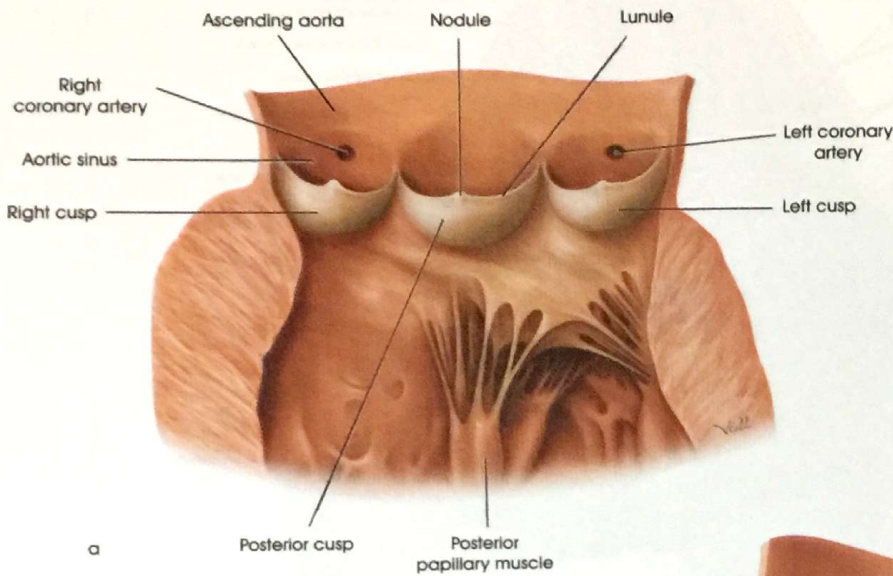


internal features of right ventricle

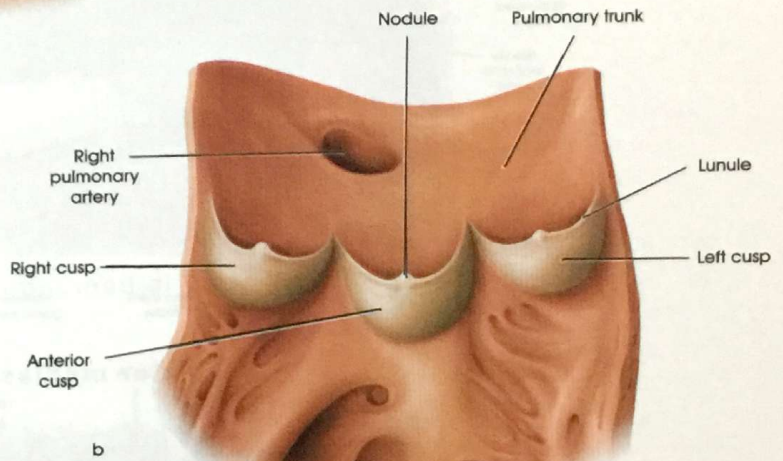
Atria, Ventricles and Interventricular Septum



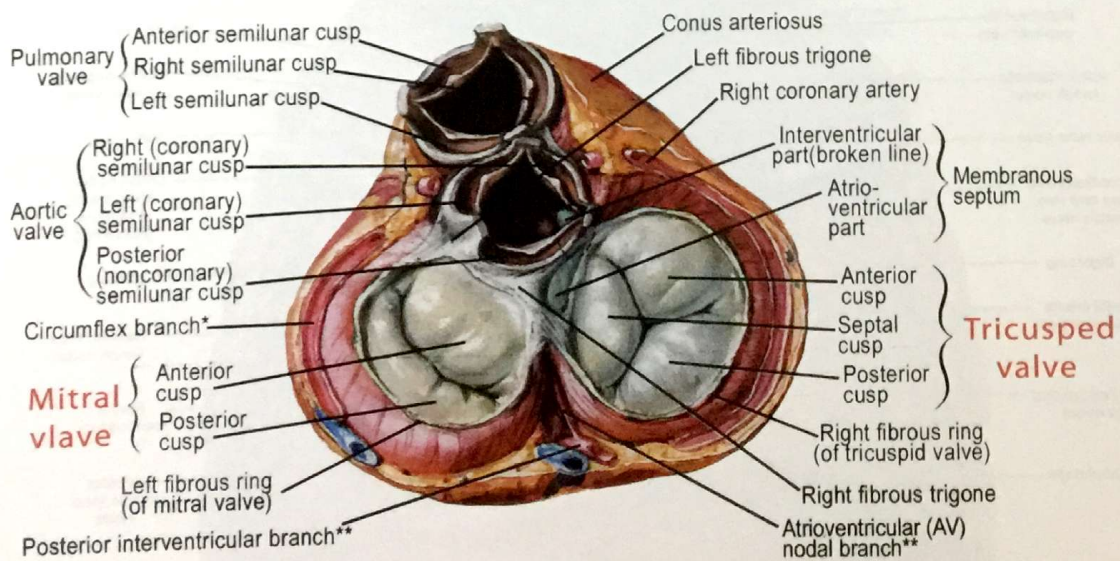
Semilunar valves

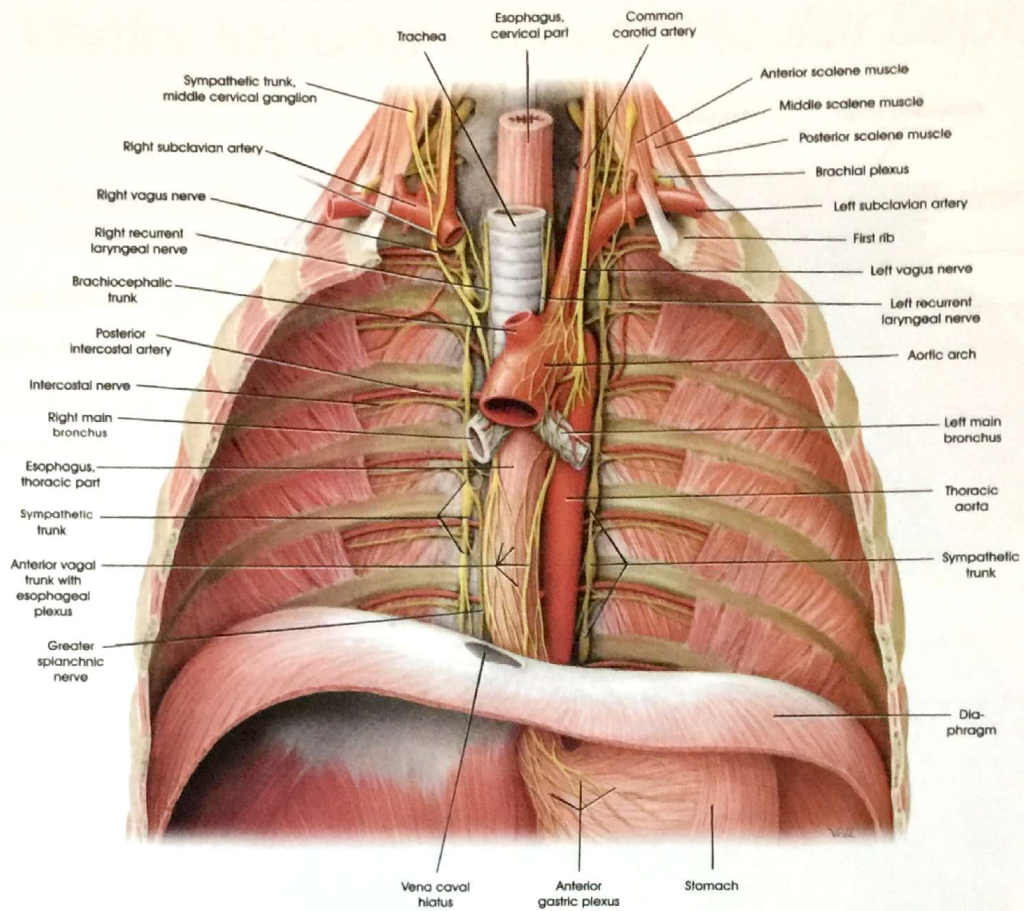


a Aortic valve

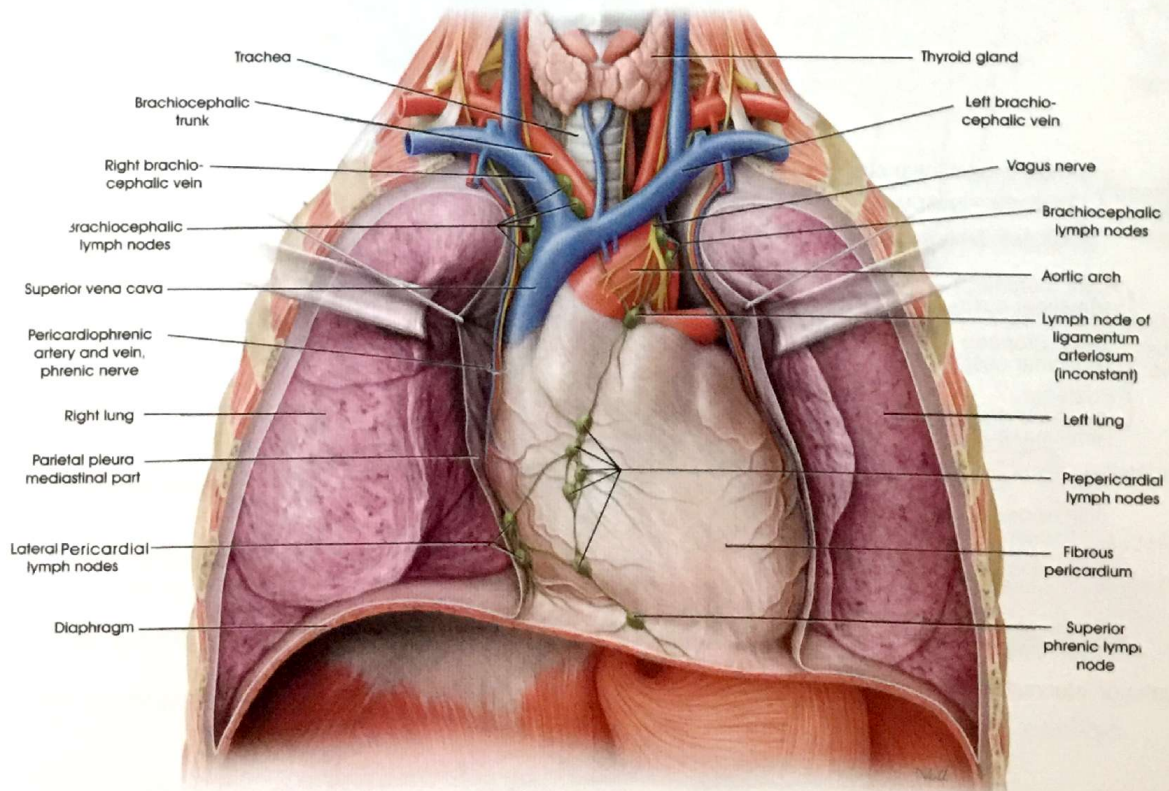


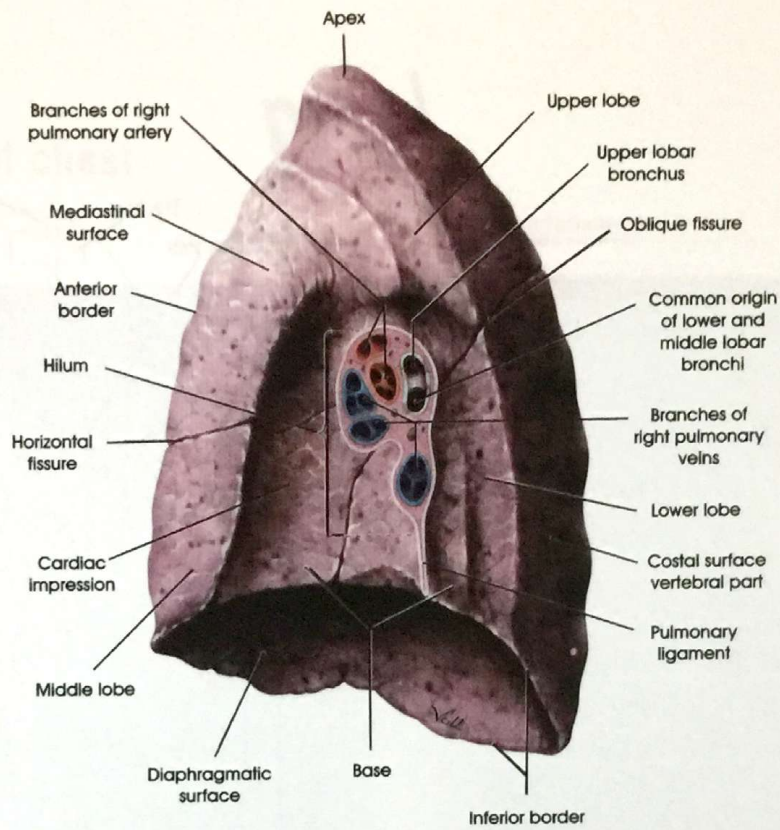
b Pulmonary valve



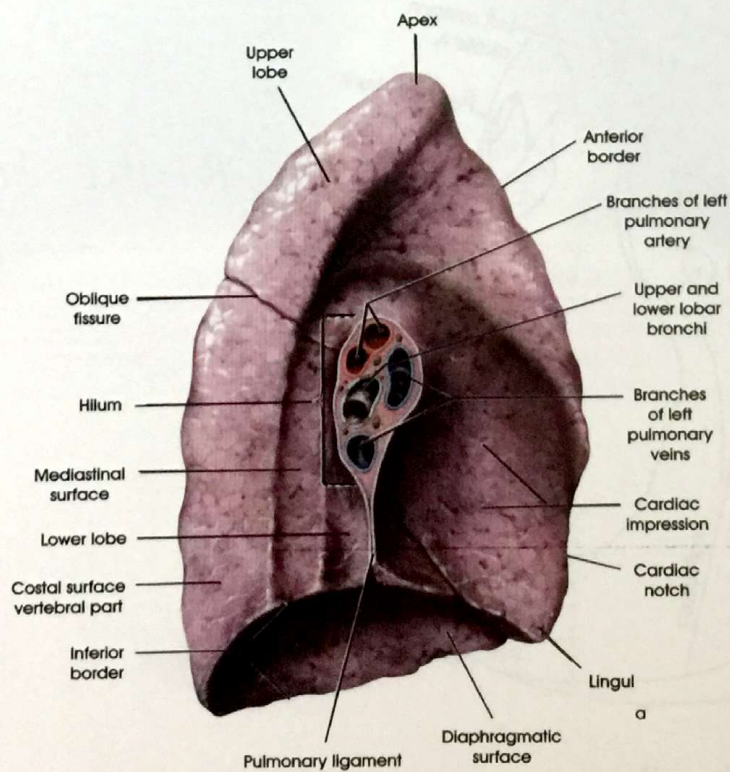


posterior mediastinum



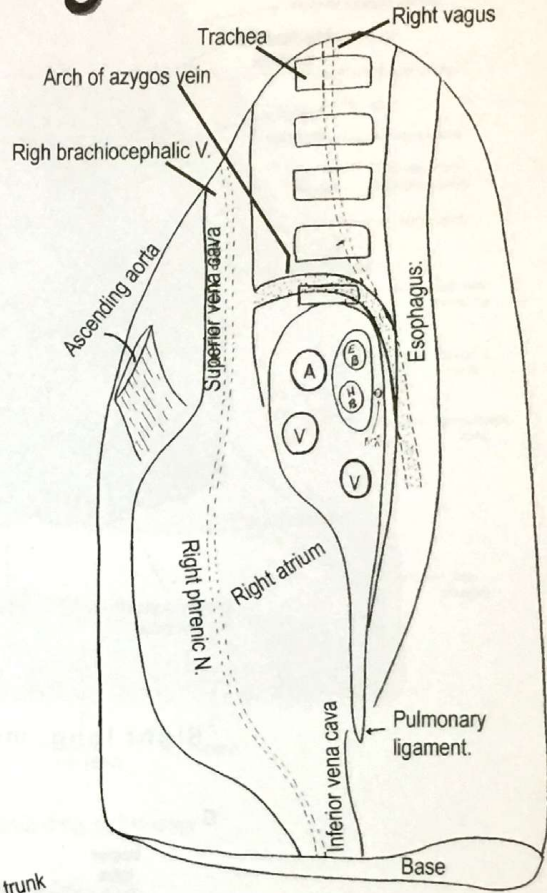


Right lung, medial view

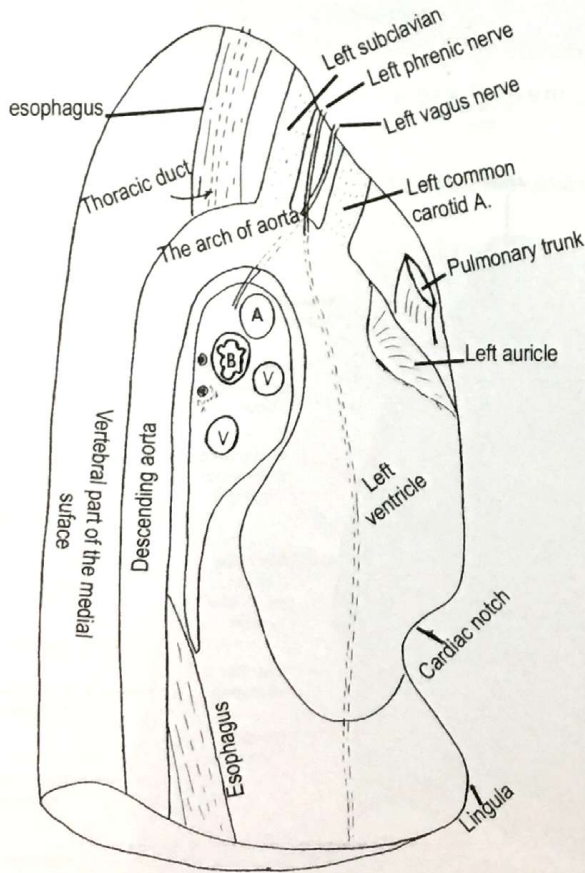


Left lung, medial view

Lung

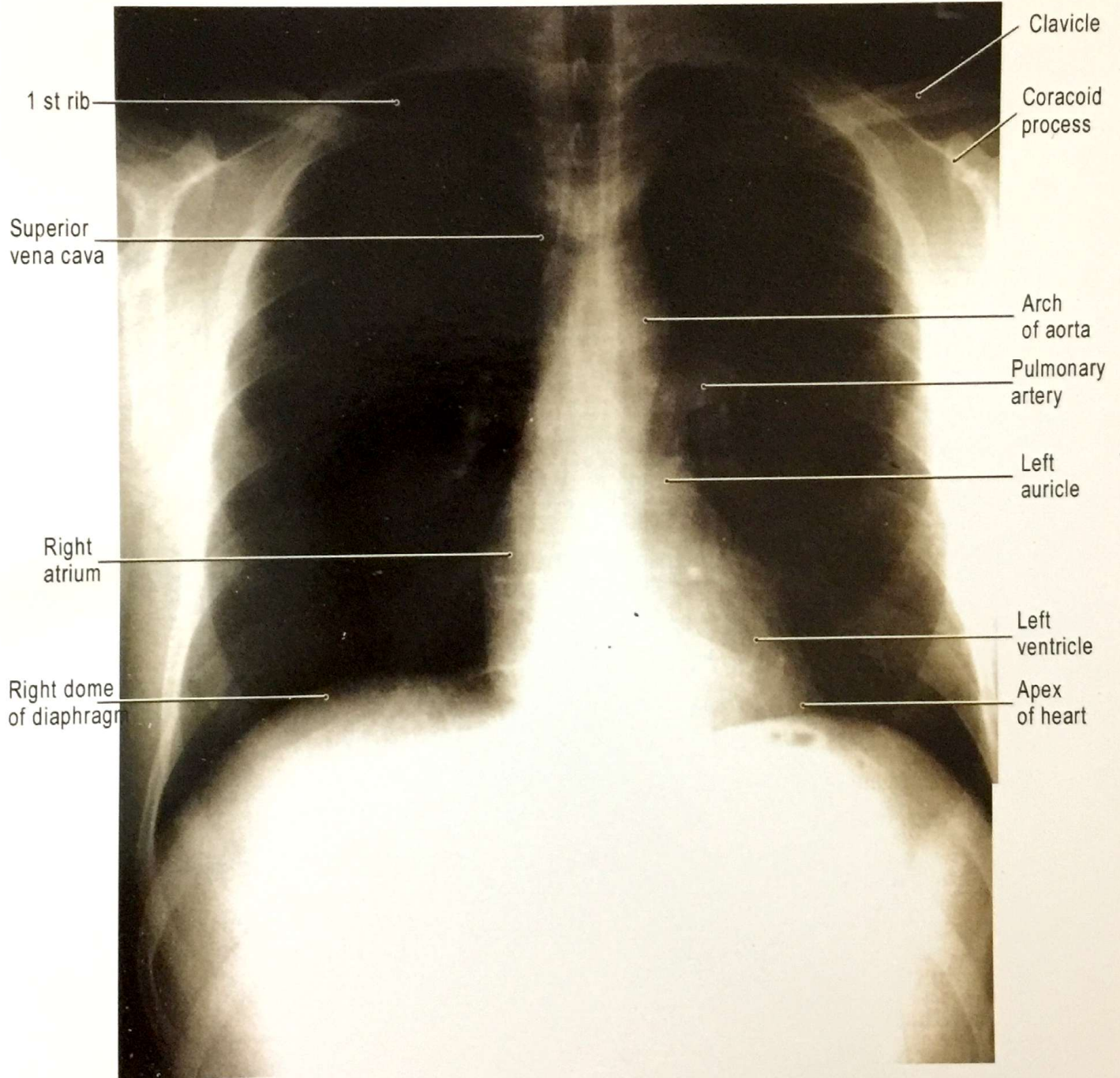


Right lung



Left lung

Radiograph of chest



FIKY'S

MINI ATLAS OF
ANATOMY



DR. MOHAMED EL-FIKY

Ass. Prof. of Anatomy & embryology
Faculty of Medicine Menoufia University
E.mail: fiky@yahoo.com
Tel:(002) 0100 6662266

FIKY'S MINI ATLAS:

- 1- Part I thorax & vertebral column.
- 2- Part II abdomen , pelvis & perineium.
- 3- Part III upper limb.
- 4- Part IV lower limb.
- 5- Part V head and neck.
- 6- Part IV neuroanatomy.

